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# USSR Report

HUMAN RESOURCES

No. 54

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# LABOR

## BASIC DIRECTIONS OF WAGE DIFFERENTIATION OF INDUSTRIAL WORKERS

Moscow EKONOMICHESKIYE NAUKI in Russian No 1, Jan 82 pp 60-67

[Article by Ya. Gombert and L. Sushkina, candidates of economic sciences]

[Text] Among the most important tasks outlined by the 26th CPSU Congress is continued improvement of the organization of wages, in the course of which it is necessary to ensure their full conformity to the contribution of workers to public labor. "Life," Comrade M.A. Suslov noted in a speech at the All-Union Conference of Heads of Chairs of Social Sciences, "requires boosting the stimulating role of wages. "And this requires striving at all times everywhere for the direct dependence of their size on the actual results of labor."<sup>1</sup>

As a result of the implementation of a broad range of measures on improving distributive relations (a periodic rise of the state minimum wage, a primary increase in rates of average-pay categories of personnel, dissemination of regional coefficients to all sectors of the national economy in the eastern and northern regions of the country and so on) under conditions of growth of social productivity of labor, the pay level of workers and employees in the USSR is constantly growing (see Table 1).

Table 1. Average Monthly Pay of Workers and Employees by Sectors of the National Economy, rubles\*

	1965	1975	1980	In % of 1965 1975	1980
Entire national economy	96.5	145.8	168.9	151.1	175.0
Industry (industrial production personnel)	104.2	162.2	185.4	155.7	177.0
including workers	101.7	160.9	185.5	158.2	182.4
Construction (construction and installation work)	112.4	181.1	204.5	161.1	181.9
including workers	108.4	180.3	207.9	166.3	191.8
Agriculture (sovkhozes)	74.6	127.3	149.7	170.6	200.7
including workers	72.5	125.3	149.0	172.8	205.5

\* Source: "Narodnoye khozyaystvo SSSR v 1980 g." [USSR National Economy], Moscow, 1981, pp 364-365.

1. Suslov, M.A., "High Calling and Responsibility."--PRAVDA, 15 Oct 1981.

It can be seen from Table 1 that in an overall significant growth of wages of Soviet workers perceptible differences are to be found in the rate of their growth, which cannot but help to exert an influence on income correlation with social groups. The figures of Table 1 show that the indicated correlation has changed in the direction of convergence of incomes of different social groups, that is, in a direction corresponding to the general tendencies of development of a mature socialist society. Still while earnings are retained as a form of socialist distribution, their differentiation must likewise be retained, as it objectively reflects differences in the amount and quality of labor. Depending on what the specific features of technical progress are under the given concrete conditions and the social-economic tasks being solved by society with retention of the prevalent tendency as a whole for gradual leveling of wage levels, the need may arise for a temporary increase in pay differences, if it is dictated by the requirements of the law of distribution according to one's labor for the purpose of a more valid reflection of labor outlays in wages. In the final analysis, differentiation of wages develops under the joint influence of a general long-term tendency for equalization of income and tendencies for local increase of differences characteristic of relatively short periods. This is confirmed by data reflecting the dynamics of intersectorial relations of average wage levels of personnel by sectors of industry. With an average 1.8-fold growth during 1965-1980 of the average pay of workers and employees in industry, the tendency is clearly expressed of a narrowing of the range of differentiation of average earnings between light and heavy industry. In 1965, the average pay of workers in the coal industry (a sector with the highest level) was higher compared to the sewing industry (a sector with the minimal level) by a factor of 2.7, and in 1980 by a factor of only 2.2 (see Table 2). Differences in the average pay of engineering and technical personnel for the sectors varied from 2.6- to 2.1-fold. This drawing closer was determined primarily by the accelerated rise of the minimum wage size.

Reduction of differentiation in the wages of different social groups is also shown by changes in the decile coefficients (relationship of top and bottom deciles, that is, wage levels, above and below which apply respectively to 10 percent of the entire aggregate of workers) in sectors of industry. Thus, for example, the aforesaid coefficient of differentiation in ferrous metallurgy in 1976 compared to 1966 was reduced from 3.2 to 2.3, in machine building--from 2.8 to 2.6 and in the chemical industry--from 2.5 to 2.2.

The starting point in pay differentiation is quality of labor, which in this case is understood as complexity of labor with its corresponding level of vocational training of workers. Differentiation in pay depending on its quality is reflected in the relationships of wage rates and wages on the basis of grade categories.

Tendencies in wage differentiation are determined by a policy of the Soviet state aimed at a systematic rise in the wage and salary minimum of medium-pay categories of personnel as well as changes in their vocational qualification makeup. As a result of an increase in the rate of the first grade the correlations of extreme grades of wage rates were markedly reduced, which served as the basis for a reduction in the spread of wage differentiation (see Table 3).

Table 2. Average Monthly Wages of Sectorial Workers in % of Wages of Sewing-Industry Workers

Sectors of Industry	1965	1980
Electric power	137.7	128.2
Coal	266.2	217.7
Nonferrous metallurgy	210.9	190.5
Ferrous metallurgy	172.0	156.7
Petroleum production	148.9	155.8
Petroleum refining	145.4	137.1
Chemical and petrochemical	142.1	132.0
Machine building and metalworking	140.2	137.3
Timber procurement	152.9	153.6
Woodworking	125.3	130.7
Textile	111.7	118.2
Food	118.1	118.9
Sewing	100.0	100.0

Data on changes in the distribution of workers engaged in mechanized and manual labor, as well as in wage rates, are of significant importance in characterizing the changes that have taken place in the composition of worker cadres. Analysis of the data of the USSR Central Statistical Administration on distribution of workers engaged in mechanized and manual labor in industry during 1959-1979 shows that in the course of this period the number of workers working with the help of machines and mechanisms, as well as those keeping watch over the operation of automatic machines (this includes operators with high qualifications engaged in continuous processes), grew almost 10 points. There was also an increase in the relative share of workers engaged in the repair and adjustment of machines and mechanisms. Although distribution of workers by wage rates provides only an approximate idea of the qualifications structure of persons engaged in industry, nonetheless the presented data disclose a clear tendency for growth of the relative share of persons of the highest categories (4th-6th). Thus, for example, while in 1962, the share of workers found in the 4th-6th categories in industry comprised 33.2 percent, in 1979 it had grown to 45.6 percent. In machine building and metalworking, the number of workers in the highest categories amounted respectively to 24.4 and 41.6 percent for the aforesaid years.

In connection with technical progress the growth of complexity of labor, certain economists believe that economic development in the immediate future will be accompanied by a reduction in the range of complexity. In reality, the process of change of the vocational qualification structure of workers is more complex and its characteristics are not exhausted by a change in the marginal relationships of labor complexity. The fact is that the initial mechanization of numerous and diverse manual operations requires a relatively extended time. Consequently, under conditions of further technical renewal of production, the situation will continue to exist over the course of a considerable period of time where a large number of workers are classified in the lowest categories. But with growth of mechanization of labor there will evidently take place, on



Table 3. Relationships of Wage Rates of Extreme Categories by Sectors of Industry

Sectors of industry	Range of wage rates	
	after introduction of 45-ruble monthly minimum	after introduction of 70-ruble monthly minimum
Ferrous metallurgy (basic production)	1:3.2	1:2.1
Nonferrous metallurgy	1:2.85	1:1.71
Chemical	1:2.6	1:1.71
Machine building	1:2.0	1:1.71
Timber procurement	1:2.0	1:1.71
Textile	1:1.8	1:1.71
Light	1:1.8	1:1.58
Food	1:1.8	1:1.58

the one hand, growth of the highest level of complexity (in this connection a certain expansion of its spread is possible) and, on the other, significant redistribution of workers in the higher categories, accompanied by a rise of the relative share in the total number of employed of persons of medium and high qualifications and therefore of the general qualification level.

Usually, differentiation of pay depending on complexity of labor (wage rate) means differences in pay for each given period because of the existing vocational qualifications structure. At the same time, the relation of wages to complexity of labor, taking into account the wide accessibility of general and specialized education under the conditions of developed socialism, may also be considered as temporary differentiation determined by different successive steps in the growth of a worker's qualifications in the period of his labor activity. At the same time, it is necessary to keep in mind that the process of vocational growth under conditions of a high general-educational level and specialized training is accelerated, and this is accompanied by the growth rate of individual pay. Such a compression of time required for the attainment of vocational maturity is an important but unfortunately still insufficiently studied aspect of differentiation of wages.

Differences in wages to a significant degree depend on the conditions of work. They are usually understood as the aggregate of sanitary-hygienic factors of the production sphere determined by the tools and objects of labor as well as by environmental factors basically of a natural climatic character exerting an influence on the health, general vital activity and working capacity of a person. Working conditions are thus influenced by a large number of interacting factors. For this reason there exists an expanded version of treatment of working conditions according to which in addition to the enumerated factors there are included level of social service (particularly the development of children's and medical-sanitary institutions), forms of labor organization and servicing of work places, social-political climate in production and so on.

Some authors tend to also include here systems of pay, level of income, that is, to actually draw closer the term "conditions of labor" to "standard of living."

In our opinion, inasmuch as we are dealing with reflection of differences in working conditions in wages, it is justifiable to limit the aggregate of sanitary-hygienic factors stemming from the production environment. At the same time, the labor process in itself characterized in terms of intensiveness should be considered as an independent object of research.

At the present time, several directions of possible growth of labor intensiveness have been noted in industry and other sectors of the national economy: in connection with the expansion of continuous automated processes in basic production; as a result of improvement of technical norm setting and expansion on this basis of the sphere of use of technical based norms; as a consequence of the growing use of shift and other set targets for periodically paid auxiliary work. Under conditions of broad intensification of public production, the problem of intensiveness of labor acquires increasingly greater importance as a factor of growth of its productivity with optimal limits. At the same time, the study of intensiveness of labor from positions of technical norm setting (equal stress of norms) from the point of view of wage differentiation still is in many respects in the initial stage. The study and generalization of forms of intensiveness in different sectors of production with account being taken of the special features of equipment, production processes and labor organization are of paramount initial importance both in the theoretical and in the practical aspect. On this basis there should be developed criteria of normal, or public, intensiveness of labor and methodological means of determining equally tense norms.

But even in the asserted treatment of conditions of labor, its social aspects have to be also considered. There must also be taken into account the fact that social-economic components are increasingly being introduced into the given concept and it is becoming more capacious inasmuch as in organization of wages there have to be taken into account not only factors of the production sphere as such but its social assessment as well. In this sphere, the degree of satisfaction with labor achieves a growing importance; its richness of content, prestige of vocation, rating of its importance depending on its place and role in the public production process, degree of independence of the worker and his creative range, prospects of growth of qualification and possibility of promotion to a higher vocational qualification level. The increased importance of social criteria in evaluation of labor under conditions of intensive growth of the cultural and vocational level of workers is one of the significant factors in differentiation of wages on the basis of conditions of labor.

The effect of working conditions is determined by several different guiding principles. As a result of technical progress--mechanization of manual labor and neutralization or elimination of harmful conditions, the importance of this factor is reduced. In addition to this there come into being new sectors of production and technological principles affecting the object of labor and exerting a negative influence on the human organism. With the growth of the

educational level and general culture of workers and employees, appraisable criteria of conditions of labor and its attractiveness as well as notions of the compensation level undergo change. In the past 10-15 years, the influence of working conditions on wage differentiation the whole has grown.

What has been said permits making the conclusion that in sectors of industry the existence of a comparative large number of jobs with working conditions deviating from the norm and with a steady rise of the cultural-technical, general-educational and skill level of workers creates certain difficulties in providing sectors of heavy physical labor with manpower; this evidently could require a further expansion of wage differentiation on the basis of working conditions, which in its turn could lead to a certain increase in intersectorial wage differences.

As a result of introduction of a minimum wage of 70 rubles per month and boosting of rates and salaries of medium-pay categories of personnel, differentiation of wage rates was significantly expanded on the basis of working conditions in sectors of light and food industry. The latter contributed to better accounting of conditions of labor at work places through the wage system and therefore to a more correct reflection of this factor in intersectorial wage differentiation. It should also be noted that existing differences in wage rates on the basis of working condition are still insufficient from the point of view of providing the necessary material interest for attracting workers to certain jobs with working conditions that deviate from the norm. Even today the actual pay of these jobs in many production sectors deviates from the proportions provided by the wage system (especially for jobs with particularly difficult and particularly harmful working conditions). At the same time, the existing wage system for a relatively large number of nonmechanized jobs still provides a higher level (by one or two grades), with account being taken of difficulty independently of degree of complexity.

The studies carried out by the Scientific-Research Institute of Labor on the classification of working conditions and development of criteria of their appraisal confirm the necessity for a more differentiated grouping than at the present time of jobs on the basis of working conditions and their pay. This makes it possible to use more efficiently and economically different compensations while taking into account the real effect of the most important components of the production environment in different economic sectors on the human organism and working capacity.

The need for providing labor resources to the sparsely inhabited remote northern and eastern regions of the country that are experiencing a shortage of skilled manpower due to the considerable development of sectors in these regions which play a significant role in the growth of the country's industrial potential causes an increase in wage differentiation depending on the location of enterprises in the country. This may be accompanied to a certain degree by an increase in intraregional wage differentiation.

Regional wage coefficients serve as the chief mechanism of such regulation. In the northern regions in addition, wage increases are employed for continuous work at enterprises. Maximum sizes have been established for coefficients and



increases for the northern zones of Siberia, the Far East and the European North. Although the function of regional coefficients consists of the determination of regional correlations of wages in accordance with differences in the conditions of manpower reproduction, they by themselves cannot provide the necessary proportions in this field. Increases on the basis of regional coefficients constitute only one of the structural elements of wages, interacting together with other of its parts. Their effectiveness (the reality of correlations found in the system of regional coefficients) depends on the original base from which they are computed.

Coefficients are determined through a comparison of indicators of the living standard in the given region and in the base region, that is, a region with normal natural climatic conditions that is sufficiently developed in an industrial sense and in which conditions of manpower reproduction are considered as being on a socially necessary level. The system of regional coefficients determines proportions in wage levels with respect to a more representative region in the indicated sense. The Central Economic region or the UkSSR, where prices for foodstuffs are those of zone I, is used as the base for different analytical calculations.

The provision of correlations determined by regional coefficients that the basic pay according to its structural elements (wage rates, extra earnings and bonuses) in the base and compared regions are approximately at the same level. In those cases where the existing level of wages in different regions is lower or higher than, for example, in the Central Economic Region, inter-regional correlations of wages deviate from the correlations existing in the system of regional coefficients, inasmuch as the latter are added to the actual wage.

A study conducted by the Scientific-Research Institute of Labor confirms the existence for a number of territories of rather significant deviations in the levels of the basic wage in the base and compared regions; such deviations are due to differences in the intensiveness of production norms, in the conditions of payment of bonuses, in the soundness of wage funds and also for other reasons requiring additional study. In many oblasts (krays) in the east of the country where regional coefficients are used, wages for a fixed aggregate of sectors for the purpose of eliminating the effect of differences in the sectorial structure are higher compared to the level of the Central Economic Region. But this increase in a number of oblasts does not achieve the proportions determined by the coefficients and is retained by a relatively lower basic wage.

In many regions of Eastern and Western Siberia, the Far East and several other regions characterized by severe natural climatic conditions, weak economic development and population density, higher coefficients have been established (by an average of 5-30 percent) for individual groups of enterprises or types of jobs performed primarily outdoors under difficult working conditions (petroleum, gas, coal, timber, fish sectors of industry, ferrous and nonferrous metallurgy, construction, geological prospecting work, certain types of transport work and so on). Inasmuch as higher wage (salary) rates have been introduced for workers of sectors of heavy industry, with account being taken of

the conditions of their work, the question of the rightness of setting higher regional coefficients for enterprises of these sectors and operations is at first glance debatable. In the preferential position of enterprises of a number of sectors, it is possible to see a deviation from the territorial principle of regional wage regulation. But the practice attests to the fact that for performance of heavy work under difficult natural climatic conditions in economically undeveloped regions the established compensations for the working conditions are insufficient to attract and hold workers at enterprises of a number of sectors. For this reason, at the present time there is in operation in some economic regions a partial intraregional sectorial differentiation of regional coefficient which encompasses a rather significant number of enterprises (jobs) and exerts a definite influence on regional correlations of wages.

What is the economic sense and importance of the practice established over a long period of time of increased regional wage coefficients for individual groups and enterprises of a number of sectors of industry and the national economy? These preferential conditions are in essence a form of compensation connected with the national-economic importance of enterprises playing a leading role in the development of the country's economic potential under the conditions of the initial stage of economic development of regions with difficult natural climatic conditions not provided with local labor resources. It can be assumed with a certain justification that the significance of this factor in the developed economic regions will gradually lose its importance from the point of view of influence on intersectorial differentiation of wages. In a number of newly developed regions of Siberia and the Far East that are in the initial stage of urbanization, the national-economic importance of the most significant industrial complexes will determine in the immediate future to a certain degree the size of the increased regional coefficients.

Over the course of the past several decades, the influence of demographic factors on different economic processes has been studied with ever increasing and growing interest in our economic literature. Adequate basis exists for this. Changes in the demographic situation as a whole or in some of its aspects must be taken into account in the development of general and regional forecasts of movement of labor resources. This is connected with the determination of the basic directions of growth of labor productivity and technical policy, regional location of production, training of skilled cadres and so on. The demographic factor cannot remain outside the field of vision even when examining questions of wage differentiation.

Wages are a fundamental source of reproduction of the work force. With a given family income their size varies depending on the size of the family and on the relative share of employed. Average per-capita income is quite significant as a kind of final indicator of consumption level. For this reason wage differentiation is in the final analysis reflected not only in average size per working person (worker, employee) but also in indicators of the aggregate earnings per family and per-capita income. Emphasizing of this consideration is especially important because industrial sectors differ significantly with respect to the indicated demographic characteristics. For example, in the textile industry the number of dependents per working person is significantly smaller than in the coal industry.



In the course of the last two decades the number of persons working in a family has grown while the number of persons in a dependent status has decreased. This process served the general tendency of releasing second family members from household work and growth of family income. But differences in demographic data caused by the social and ethnic composition of workers developing over the course of long historical development of traditions still remain significant. The wages of second members of the family only to a certain extent even out differences in the pay per worker on the average in the aforesaid demographic features of industrial sectors.

Since demographic conditions constitute a significant element in reproduction of the work force, their influence on wages is reflected not only by means of family budgets. The indicator of per-capita income reacts most delicately to factors exerting an influence on real wages and in the form of feedback exerts a certain effect on its formation of sectorial levels. This side of the problem (the existence of an inner connection between sectorial differentiation of the average wage of a worker and tendencies for an approximate equalization of per-capita income) has only been touched upon cursorily in the economic literature and is in need of additional study, as in addition to average sectorial indicators of per-capita income their intrasectorial differentiation has also to be studied.

It was noted earlier that wage differentiation develops under the influence of a long-term tendencies of equalization of incomes inherent in the socialist economy; in addition to this, it is influenced by measures aimed in accordance with the requirements of the law of distribution according to one's labor on stimulation of growth of labor productivity with account being taken of the changes made by technical progress (expanded range of complexity, the need of a more differentiated approach to conditions of labor, differences in regional conditions of reproduction of the work force and so on). In this connection, the task arises in each planning period (with the given wage fund for the national economy) of an optimum combination of both directions of movement of wages. Of important significance here is ensuring of unity in the evaluation of the differences of the labor contribution depending on the influence of these or other factors.

In accordance with what has been discussed, one may point out the topicality of the following directions of continued investigation of the most important aspects of wage differentiation:

--determination, with account being taken of changes contributed by technical progress in the vocational skill makeup of workers, of intrasectorial and intersectorial parameters of complexity of labor;

--improvement of the methodology of determining the degrees of severity and harmfulness of conditions on the basis of factorial analysis of components of the production process and the environment;

--investigation of sectorial and regional conditions of reproduction of the work force on the basis of materials of consumer budgets of workers' families;

--improvement of the system of regional wage coefficients in accordance with the results of analysis of regional data on the conditions of reproduction of the work force.

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## LABOR

### APPRAISING THE VALUE OF LABOR

Novosibirsk EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA in Russian  
No 2, Feb 82 pp 124-131

[Article by A.M. Kozlov, NOT engineer, Kalinin Electrical Equipment Plant:  
"How an Appraisal System is Devised"]

[Text] The idea of appraisal of work for the sake of its stimulation cannot be disputed. Would you not find it interesting to learn at the end of a regular calendar period that your services correspond to an appraisal coefficient of 0.94, that of your neighbor--1.06, of the shop--0.86 and of the adjoining shop--0.92? There is no doubt that such appraisals, no matter how much they may be improved, never will be exhaustive and will always retain an iota of conditionality. But if on a selective scale, they on the whole fairly and graphically characterize a number of significant facets of our activity, our contribution to the common cause, then why decline from using them in bonus situations, in competitive conditions, for certification and the like?

Let us try to show on the example of the Kalinin Electrical Equipment Plant the process of designing a system of appraising quality of work.

The generally accepted system of numerical appraisal of quality of work consists of three parts: a list of indicators, an arithmetical device of measurement (points, coefficients) and formulas with whose aid individual appraisals are reduced to a single generalizing number--the coefficient of work quality. Inasmuch as appraisals have already been introduced at many enterprises, a plant developer is ordinarily recommended to use any suitable prepared form. But who can say which is the best suited form? The operational conditions of enterprises are infinitely diverse, and a planner must be at the very least prepared to work up a new original form. How difficult such a job might turn out to be, he has no way of knowing ahead of time.

Initial requirements in regard to a future system can turn out to be quite complex and in some way even contradictory. For example, there is always the desire to encompass with indicators as many different aspects of production activity as possible; at the same time, we may not excessively complicate future accounting or allow the most important criteria to get lost in a long list of them. Or you may have such a requirement: you must not overlook the necessary differentiation of appraisals for subdivisions and levels reflecting

diverse conditions and character of activity. At the same time, a system should maintain its wholeness and unity, maintain uniformity and the like.

Hence the first thing with which planning begins: this is an answer to the question of whether to use in appraisals only complaints in connection with any form of incompleting work (the initial variant of Saratov's system of defect-free work) or to also provide positive appraisals and higher marks for achievements and successes. In this regard, an opinion has seemingly been formed: schemes including both positive and negative appraisals are more desirable as a rule.

How many indicators should be included in a scheme? After searching around for a long time, we established a list of 18 items, and if you consider sub-items as well then the number would be 40. That is probably quite many, but we feel that the recording is not so clumsy; in fact it is relatively simple since monthly results are not required for all the items, and almost all of them depend on forms of tallying already in use at the plant; moreover, for the most numerous category--workers--only 8-10 of the 40 items are required.

The next question deals with the content of the indicators: should they deal primarily with work results (level of plan fulfillment, quality of products and the like) or should there also be introduced appraisals of the actual work process, the daily actions of each worker (with the help of photographs of the workday, appraisal of documents and so on)? It would seem to be undesirable to lose sight of either one. It happens that a person works diligently and capably (for example, the supervisor), but the general results due to circumstances over which he has no control are rather meager. And in the case of another just the opposite.

We do not have the experience of a direct, broad-scale analysis of the actual work process; we assume that it is fraught with large outlays of resources and time. For this reason we restricted ourselves in our system to appraisals on the basis of totals and results without which we could not get by in any case. No doubt this constitutes a defect in our system, but practice says that if there are enough appraisals and they well encompass labor activity, then you have a perfectly workable and convincing scheme.

What formula should be used for calculation of the resultant coefficient? We use almost the most simple of all possible ones and consider it quite suitable: the coefficient of quality of labor is equal to one plus the total for appraisals minus the total for appraisals of negative indicators.

The appraisal of quality of labor is calculated both for individual workers and for subdivisions as a whole. The appraisal period is a month without any breakdown into days, 10-day periods and the like. Numerical ratings according to indicators are differentiated on the basis of level or the number of subdivisions, without deliberate scrupulousness, that is, in round figures.

How can there be shown in numerical ratings the reciprocal importance of indicators, which should be given higher marks, which smaller and by how much?

It turned out that many circumstances were included here that frequently were secondary and unexpected. For example, for each claim for replacement a reduced mark of 0.03 was made, which is in accord with the statistics of prior years. But suddenly a "splash" occurred--the plant began to receive each month several tens of claims for replacement of one small item with little economic loss. The indicator began to "overweigh" many others and it was necessary to reevaluate it.

In general: what can you equate, for example, with a reduced mark for one absence from work? For an injury? For a rating of the standard of production? No doubt it would be possible to think up some algorithm for such comparisons, but we lack it and have to depend on production experience, to some extent on statistics and sometimes on intuition. But the most reliable means in working out all details of a system is to make a test introduction, which inevitably would clarify many things.

Actually, such a test "try" of indicators, either in part or in entirety, proceeds for the duration of the entire period of planning. But a scheme that is ready in rough form will still require extended testing and finishing. In our case it is roughly a year. At first there were many corrections, but then everything gradually stabilized and the developed system became standard for the enterprise.

We did not immediately work out ratings of the level of so-called performance discipline, that is, fulfillment of various long-term and short-term administrative documents (orders, plans of measures and the like), especially those which were long-term. For example, the annual technical plan for a shop describes certain operations, but in the course of affairs new assignments deflect from their fulfillment. We determined thuswise: lower marks for delays should nevertheless be used, but their size would be reduced. Thus for unpunctual implementation of measures of the collective contract and technical plan, of documents turned over for monitoring to a special card file, reports of dispatcher conferences and quality days, a shop for nonfulfillment is reduced 0.03 point and a sector--0.05 point. It probably would have been better (and more effective) to introduce some corrections in regard to the importance of the document and so on. But we were afraid of complicating accounting though the possibility is not excluded that we might at some time resort to such corrections.

With respect to character and content, our scheme reminds one most of all of KOD--complex appraisal of results of activity--used in certain sectors. We more often call it a system of appraisal of quality of work.

The adopted (let us call them objective) appraisals do a good job of describing the work of both subdivisions and workers. But we still were obliged to make a "subjective" addition: we introduced an indicator "for special services and for contributing to organizational technical progress [orgtekhprogress]" with additional points ranging from -0.20 to +0.20 on special decision of the plant's management. There are circumstances where this is necessary despite the fact that any subjectivity is undesirable in principle.



Table 1. Appraisals According to Volume Indicators

Summary of indicators	Appraisal			
	shop as a whole	section as a whole	brigade as a whole	individual worker (includes member of brigade)
Monthly plan (in rubles, norm-hours):				
in case of underfulfillment	coefficient of labor quality is not added		-0.50 (according to results of work of section)	-0.50
in case of correction in direction of reduction	-0.10	-0.10	--	--
for each percent over 100%	+0.02 (but not more than 0.10)	+0.02	--	--
Export target (in physical terms):				
in case of fulfillment	+0.05	+0.03	+0.03	--
Fulfillment of assortment (products list) and regularity of work:				
for each $\pm 0.01$ to level of 0.80 of consolidated coefficient*	$\pm 0.01$ based on results of shop		based on results of section [sic]	

\*Consolidated coefficient  $C_{con} = c_r \times c_{pl}$

where  $c_r$  (coefficient of regularity) =  $\frac{\text{actual fulfillment for 2 10-day periods}}{\text{norm for first 2 10-day periods}}$

$c_{pl}$  (products list coefficient) =  $\frac{\text{number of fulfilled positions}}{\text{total of positions in plan}}$

We clearly realize that many assumptions and simplifications are to be found in the scheme. Those desiring so can easily criticize it at least in regard to the points or as a whole. But the system really works. With the passing of the month, the reports appear: shop No 1--0.68, shop No 7--1.12, worker Ivanov --0.87 and so on. Everyone agrees that the appraisals look quite convincing.

In regard to those persons who have to deal with problems of improving incentives I would like on the basis of what has been said to propose the following conclusions that we have developed.

Table 2. Appraisals Dealing with Production Quality

Indicators	Shop	Section	Brigade	Worker
Production of products of highest category of quality for fulfillment of volume	+0.05	--	--	--
Delivery from first production for each $\pm 0.03$ percent to 97% level	$\pm 0.01$	$\pm 0.01$	--	--
For each criticism of defect-free production	--	--	-0.02	-0.10
Work with personal label	+0.01	+0.01	--	+0.05
Claim for replacement:	(but not more than +0.06)			
because of appearance of product	-0.05	-0.10	-0.10	--
because of document (case, batch)	-0.05	-0.02	-0.03	--
Deviation card, defective work (intraplant)	-0.01	-0.02	-0.03	--
Losses from defective work and substandard work (used in regard to certain sections) for each $\pm 0.02\%$ to 2% level	$\pm 0.05$	$\pm 0.02$	--	--

First. While it is probably not given to anyone to create an ideal all-round system for assessing quality of labor, still despite many conditional factors and simplifications it is possible to produce a perfectly workable economic mechanism. Here one must never lose sight of the main objective--an aggregate appraisal of work might be needed not so much as an appraisal of quality of work or worker as an element for the development of incentives. Let everyone clearly see by what criteria it is monitored, what is expected of it, how changes for the better or for worse are assessed and let each one know where he should assure his successes and where he should do better. The picture is as if it were in the palm of one's hand. And it should be followed by incentives.

Second. A beginning planner must know and believe without fail that the techniques, methods, approaches, devices and tricks used in designing such appraisal systems are most numerous. Any well-known indicator can be shifted around (should it be needed for the job) for different aspects. And there are all possible numerical appraisals for it: pay raises for the achievement of a given mark or level, reduction for failure to reach this mark, additions-subtractions for each regular percent, for the amount produced as the result of recalculation according to a formula, additions and reductions for each instance of lapses or, conversely, successes, assessment limits ("not more than 0.10") and so on.

Indicators may be made to vary on the basis of criteria for workers. For example, the appraisal of a worker is made on the basis of a few personal indicators in combination with a few indicators of his subdivision. The assessment

of supervisors and specialists is primarily based on the results of head or servicing subdivisions with a minor correction for some personal ratings.

It is a difficult task to give more weight to local peculiarities and circumstances, but one cannot do without this. Regardless of what the circumstances might be, it is possible to make a suitable system for one's enterprise with a certain amount of persistence and, of course, without trying to do it in a rush.

Third. Appraisals of subdivisions as a whole can be directly declared as a generalizing indicator with the tallying of results and awarding of places, and the results should not be too bad. But in our production competition it is often necessary to concentrate attention on certain marks, including those which were introduced into the scheme for appraisal of work. Let us suppose that in the coming month or quarter there is a special need to set forth fulfillment of assortment and, say, standards of production without losing sight of the remaining production criteria. One may then act as, for example, in the following manner: the existing coefficient of labor quality to be called the considered coefficient and for the indicator of fulfillment of parts list and for the level of standards to introduce special additions, transforming them into determining indicators.

In bonuses for engineering and technical personnel, the coefficient of labor quality of each person is rightly called the basic indicator with a certain fixed level below which there would be no bonus and with a scale of increases to the basic bonus for it being exceeded. It may be called a supplementary indicator with a scale of changes from the base: from -50 to +50 percent, from -30 to +15 percent and so on. It is important to understand that here various variations are possible in accordance with actual circumstances.

In the described scheme, special attention was paid to the use of appraisals of quality in the issue of bonuses to workers. The indicators used for them are such that it is possible to complete the computation of the appraisals in the first workday of the next month, that is, they may be immediately used for bonuses.

In connection with the organization of brigades working on one order, difficulties have arisen primarily in the use of KTU [expansion unknown]: it is necessary to differentiate members of brigades according to skill, know-how and diligence, but this is not so simple. It is especially difficult when attempts are made to distribute on the basis of KTU extra earnings, bonuses and to some extent the wage part [tarifnaya chast']. The following variant will probably be suitable for many: the wage part to be distributed according to grades and time, the KTU to be used only with respect to extra earnings (not particularly sensitively, but at least without fear) and the bonus to be divided according to the coefficient of work quality of each person. Incidentally, in this case persons will not be artificially included among those nonfulfilling the norm (where KTU includes the wage part); the limit of the bonus also will not be exceeded (for example, by 40 percent), which could happen to some workers when the bonus is divided by the KTU.



When in 1980 "EKO" published my article on certain variants in the use of marks and coefficients for indicators of bonus payment and competition, many people, after having turned to me for additional details, felt hurt when they learned that we were abandoning that scheme to go to new ones with appraisals of labor quality. First he publishes it--then he goes to another scheme! I want to say that we did not become disenchanted with the original scheme, and here and there it continues to be used. But the system with appraisals of labor quality is on a higher level. We even believe that our searches now will make it possible to create something more finished in incentive systems.

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## LABOR

### IMPROVING UTILIZATION OF RURAL LABOR RESOURCES

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[Article by A. Zabaluyev, chief of a department of the USSR State Committee for Labor and Social Problems, A. Malakhov, deputy chief of a department of the USSR State Committee for Labor and Social Problems: "Guidelines for Improvement of Utilization of Rural Labor Resources"]

[Text] As a result of the realization of the agrarian policy worked out by the March (1965) Plenum of the CPSU Central Committee and developed at subsequent party congresses and plenums of the CPSU Central Committee, a powerful production potential has been created in agriculture, making it possible to solve problems relating to the further growth of the production volume of agricultural products, improvement of their quality and growth of the overall efficiency of sovkhoz and kolkhoz production.

Growth of the capital-worker and power-worker ratios of agricultural labor and on their basis of its productivity during the period of 1940-1978 made it possible with an almost 2.6-fold increase in the volume of production to reduce the number of workers engaged in agriculture by 9 million persons. Their social structure due to the relative growth in the number of workers in public agriculture as well as workers and employees has changed.

Important qualitative changes have taken place in labor resources; workers' general educational, cultural and technical level has risen, and an extensive army of highly qualified rural machine operators and agricultural specialists has been created. The level of the material well-being of rural workers has risen.

Growth of real income, wide-scale housing and cultural-consumer construction and development of trade and the service sphere in rural localities ensures continued drawing closer of the living conditions of city and rural workers. As a result of this, good prerequisites have been created for increasing the labor activity of rural workers and for new growth of labor productivity and efficiency of agricultural production.

The industrialization of agricultural production creates conditions for transfer of a part of the able-bodied population to other sectors of the national economy, which is objectively necessary and is a logical result of

technical progress and increased labor productivity in all sectors of material production.

While acknowledging the normality of release of labor resources from agricultural production in some regions, there should be provided a corresponding planned regulation of this process so that an absolute reduction in the number of workers employed in agriculture is carried out in strict conformity with the level of its technical equipment. The violation of such conformity is fraught with serious negative consequences which many kolkhozes and sovkhoses are already encountering. In recent years, the development of agricultural production in a number of the country's regions has been accomplished under conditions of a significant shortage of manpower.

It is especially perceptible on farms of Kazakh SSR and the Baltic republics. In the Nonchernozem Zone and several other regions of the RSFSR such as Western-Siberian and Far-Eastern the development of agricultural production even at the present time is being held back by a work-force shortage. The task of accelerated development of agriculture in these regions makes necessary sending here additional manpower from other regions of the country through resettlement. Farms in certain other regions of the country have also experienced a manpower shortage.

Such a situation has come about because the drawing off of manpower from rural localities is occurring disproportionately to the growth of technical equipment of agriculture and the change of its technology and is outstripping these processes. A significant part of the workers, especially young people, have left or are leaving rural areas not because they are unable to find use for their labor in agriculture but because rural working and living conditions no longer satisfy them. In this connection, the age makeup of the rural population in some union republics (for example, Belorussia, Kazakhstan and Latvia) in recent years has changed: the relative share of the working-age population has decreased while the share of persons past working age has increased. Under such conditions, exceptional importance is to be found, on the one hand, in stabilization of cadres in agriculture, curtailment of their being drawn away from rural areas and the involvement of young people reaching working age in agriculture and, on the other, an all-out increase in the efficiency of utilization of rural labor resources, the quality of labor resources and the skill level of workers, which is an aim of the Basic Directions of Economic and Social Development of the USSR for 1981-1985 and for the Period to 1990. The solution of this task is indissolubly connected with the accelerated solution of rural social problems, improvement in the conditions of labor and a change in its character and content. "One of the most important tasks today," L.I. Brezhnev said at the July (1978) Plenum of the CPSU Central Committee, "is uniting agricultural production with the standards understood in the broadest sense of the word as standards of labor, living and human relations."<sup>1</sup> The party is doing today everything necessary for speeding up the solution of this problem, which is

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1. L.I. Brezhnev, "O dal'neyshem razvitii sel'skogo khozyaystva SSSR" [On the Further Development of USSR Agriculture]. Moscow, Politizdat, 1978, p 44.

convincingly shown by the measures adopted both in the field of strengthening of the material-technical base of agriculture and in the field of satisfaction of the growing housing, cultural and consumer demands of rural workers.

In examining problems of stabilization of cadres in agriculture, certain authors desire to single out some individual factor as a chief cause: low level of wages, dissatisfaction with the conditions of labor and recreation or housing, cultural and consumer conditions and the like. But, as study of the question shows, the creation of stable labor collectives can be provided only by a complex of measures relating to the improvement of living conditions in rural localities. The creation of a healthy psychological climate and normal relations in the collective are also very important. In a report at the 26th CPSU Congress, L.I. Brezhnev said: "Everybody understands that people work better and more eagerly there where they sense constant care for the improvement of the conditions of their work and life. The plant or farm is also a home where a person spends about a third of his life. Here everything must be convenient, modern--from the work place to the concessions and dining rooms."<sup>2</sup> L.I. Brezhnev considered an attitude which looked upon such questions as something secondary and incidental to be basically wrong, a harmful position. Experience shows that at those kolkhozes and sovkhoses where heads of farms, party committees, soviet and trade-unions organs show no less concern for the satisfaction of housing and everyday needs and the growing cultural requirements of rural workers than for the development of production there are assured rapid increase of agricultural production and growth of labor productivity as well as a high level of efficiency in the utilization of one's own labor resources and all production problems are solved without bringing manpower from elsewhere.

For example, at Lyuban' Sovkhoz in Minskaya Oblast, where a significant growth of agricultural production has been achieved in recent years and much concern is shown for improvement of the working and living conditions of workers, the farm has permanent cadres. Shops have been created at the sovkhos for the production of canned goods, starch, fruit and berry juices, grass flour and so forth, which has made it possible to keep all workers employed the year around.

Following the end of field work, workers released from agriculture are sent to auxiliary production operations, while in the period of intensive field harvest work, they add to the ranks of the sovkhos's agricultural workers.

Special attention is paid to the needs and requirements of the youth. Young workers receive a lump-sum grant; young families are provided loans and aid in construction of housing; a common barn is provided for livestock that is personally owned, and the necessary conditions are created for obtaining a specialized or higher education. Many of the young workers have acquired vocations that are new for rural areas (operator, technologist); about 40 people have been sent to study at tekhnikums and VUZ's with stipends paid by the sovkhos. As a result, the turnover of young people has in essence been eliminated; graduates of the local secondary school eagerly stay on to live and work at the sovkhos. At the

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2. "Materialy XXVI s"yezda KPSS" [Materials of the 26th CPSU Congress]. Moscow, politizdat, 1981, p 58.



present time, most of the workers at the sovkhos are former graduates of the local schools, and 76 percent of them are under age 40.

Agriculture still has significant reserves in regard to economy of labor resources and increase of efficiency of their use. For this reason growth of gross production during the 10th Five-Year Plan came from growth of labor productivity; during the 11th Five-Year plan it is planned to obtain it from the same source. The fulfillment of the targets of the current five-year plan in regard to labor productivity will make it possible to release from agriculture approximately 2.2-2.4 million persons. Large reserves of labor economy in agriculture are to be found in its mechanization and reduction of the labor intensiveness of agricultural production. Such possibilities are to be found at practically every kolkhoz and sovkhos, and they must be utilized.

"The party and the state," L.I. Brezhnev observed in an address at the 26th CPSU Congress, "have been devoting and are devoting much effort to make man's labor not only more productive but also more substantial, interesting and creative. The most important role called upon to be played here is the elimination of manual, low-skilled and heavy physical labor.... This is not only an economic but also a serious social problem. To solve it means to eliminate the significant barriers existing on the way to transformation of labor into the first vital requirement of each person."<sup>3</sup>

At the present time, many basic field operations are mechanized. In the last 10 years, a great deal was done for mechanization of operations in animal husbandry. But in agricultural production as a whole, manual labor is still predominant. Thus in 1980 in crop production on sovkhoses for each tractor and machine operator there were simultaneously 2.77 workers and on kolkhoses 4.0 kolkhoz farmers engaged in manual labor, while in animal husbandry 63-65 percent of all work was performed manually.

Of course, sharp curtailment of the use of manual labor in agriculture is possible only with comprehensive mechanization of all production processes. During the 11th Five-Year Plan it is planned to complete comprehensive mechanization of cultivation of the most important agricultural crops and to raise the level of mechanization of animal husbandry through increased deliveries of tractors, trucks, combines and all other agricultural machines to agriculture and through raising of their productivity, quality, reliability and economicalness.

In addition to this, much can be done on sovkhoses and kolkhoses through their own efforts. Thus, at Moskalenskiy Sovkhos in Omskaya Oblast, a big contribution to the mechanization of labor processes is being made by sovkhos workers who do things with great skill, inventors and rationalizers. Through their initiative mechanization equipment that has been lacking was developed and introduced at grain-cleaning locations of the sovkhos, making it possible to perform practically all operations (which formerly used 16 workers) without the use of manual labor. For picking up hay from mows grain combines that have outlived

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3. Ibidem, p 57.

their purpose for what they were intended are used. Special hayrick carts were made at the sovkhos with whose help K-700 and K-701 tractors transport hay and straw to the animal-husbandry farms practically without the use of any manual labor. Modernization of animal-husbandry farms has made it possible to comprehensively mechanize all labor processes for servicing 80 percent of the cattle, including more than 90 percent of the cows. As a result, manual labor has been eliminated in comprehensively mechanized operations; the content, character and organization of labor have changed, its division has been broadened and workers have started performing the functions of operators of machines and mechanisms. All this has made it possible to reduce labor outlays per quintal of weight increase by 32 percent and per quintal of milk--by 42 percent and to reduce the number of workers engaged in manual labor by 240 persons, or 31 percent.

Such work is being done on many sovkhoses and kolkhoses in Omskaya Oblast. In 1980 in dairy animal husbandry alone this was responsible for economy of labor of 12,200 persons compared to 1970, which constitutes roughly 36 percent of the number of workers in the given sector.

but study of the situation in localities shows that this problem is not paid sufficient attention everywhere. Thus on farms of Buryatskaya ASSR and Chuvashskaya ASSR, available equipment for doling out fodder on animal-husbandry farms in many cases is not used for various reasons and these labor-intensive operations are performed manually as of old.

Considering the exceptional importance of the problem of release of manual labor in agriculture, in our view it would be advisable to establish for sovkhoses and kolkhoses in the state plan targets for reduction of the use of manual labor similarly to the way it is being done in sectors of industry.

The present practice of deliveries of agricultural equipment to kolkhoses and sovkhoses likewise does not fully contribute to the solution of this problem inasmuch as sovkhoses and kolkhoses as a rule do not receive the full complex of machines that make it possible to completely or to a significant degree mechanize labor in connection with the cultivation of this or that crop or group of crops but only its individual components and the anticipated labor economy is not always achieved. At the same time, the experience of kolkhoses and sovkhoses in Belorussia, the Ukraine and many oblasts of the RSFSR in the organization of procurement of coarse and succulent fodder shows that with the availability of the necessary selection of machines and concentration of equipment in specialized mechanized detachment it is possible to perform all agricultural operations with minimal outlays of manual labor.

Broad possibilities of boosting effectiveness of utilization of rural labor resources are being created by interfarm cooperation of production, which has been developed in the country, its concentration and specialization, including interfarm cooperation in the field of mechanization and electrification of agriculture on the basis of the experience of kolkhoses and sovkhoses of Moldavian SSR and Stavropol'skiy Kray.

Reserves for increasing the volume of production and growth of labor productivity are to be found in overcoming the seasonal character in the use of labor resources and in providing them with full employment in the course of the year.

The special features of agricultural production during the period of intensive field work require the use of additional labor in agriculture. Analysis of reporting data shows that the coverage of these additional requirements is done by kolkhozes and sovkhoses to a significant degree with their own labor resources: maximum use of permanent workers at sovkhoses and able-bodied kolkhoz members at kolkhozes; during this period vacations are curtailed and also there are employed seasonal workers from members of the families of workers and employees of sovkhoses and other enterprises and organizations located in rural localities and kolkhoz members--teenagers up to 16 years of age as well as older students and pensioners. In 1979, the number of these workers during the months of maximum employment on sovkhoses and kolkhozes exceeded their number in a month of minimum employment by 5,980,000 persons and made up about 70 percent of the total number of additional workers during these months. With curtailment of the volume of agricultural work, these workers are released from the collectivized farm, as a result of which large reserves of labor resources are created. The number of such workers in an average yearly count is about 500,000-550,000 persons. The reserves of labor are especially big on kolkhozes. Here every able-bodied kolkhoz member in 1979 worked 255 days in that year, which was 21 days less than at sovkhoses. These losses of labor are the equivalent of more than 1 million average-year workers. Furthermore, more than 177,000 able-bodied kolkhoz members are not engaged on the collectivized farm. Even if you take into account vacations, rural free labor resources comprise about 1.5 million persons. In the existence of a sphere of rural use of labor in the in-between seasons period, a considerable portion of pension-age persons could participate in collectivized production. On kolkhozes alone, more than 2.4 million persons were employed; they put in 89 days per worker.

The free labor resources available in rural localities may be partially used for work in animal husbandry for the purpose of providing arrangements of labor and rest conditions for animal-husbandry workers. But the main way of increasing efficiency of use of rural labor resources lies in the field of uniting agricultural and industrial labor on the basis of agroindustrial integration. Only in this way would it be possible simultaneously to provide the full employment of rural labor resources and agricultural manpower during the season of field work. The search for ways of solving these problems is of important national-economic and social value.

At the present time sovkhoses and kolkhozes put out industrial production worth more than 16 billion rubles. On 1 August 1979, about 600,000 sovkhos workers and kolkhoz members were engaged in this work. But the sphere of this activity is limited. At the present time, farms have the right to engage in certain forms of industrial work--processing of agricultural raw materials, production of construction materials, woodworking and so on. But experience shows that the sole development of these forms of industrial production does not make it possible to definitively solve the problem of employment of rural labor resources. The process of processing agricultural raw materials coincides in time essentially with the harvesting of agricultural crops. For this

reason the workers of such enterprises for all practical purposes cannot participate in agricultural production. In 1979, for example, the number of workers engaged in subsidiary production operations of sovkhozes was reduced by 4-7 percent during the months of intensive field work.

The practice of sovkhozes and kolkhozes shows that in addition to the development of subsidiary operations and industries, an effective method of solving this problem is wide-scale cooperation of kolkhozes and sovkhozes with industrial enterprises of the country for the production of industrial production and consumer goods.

Cooperation of agricultural and industrial enterprises makes it possible more fully to combine their interests than the development of rural branches of industrial enterprises, inasmuch as the manpower remains at agricultural enterprises and it is possible to achieve its maneuvering. Taking this into consideration, it would be worthwhile to provide a broader expanse for the development of cooperation of industrial enterprises experiencing a shortage of manpower with kolkhozes and sovkhozes that have it in surplus through a legislative solution of related questions (for example, granting of the right to industrial enterprises to turn over to sovkhozes and kolkhozes necessary equipment, mechanisms, materials, tools and raw materials on a contractual basis; providing financial assistance to kolkhozes and sovkhozes for this purpose; creation of necessary economic incentives for the development of such cooperation. It would be advisable to develop this cooperation on a planned basis, taking into account the special features of the republics and economic regions and to have it accounted for in the production plans not only of agricultural but also of industrial enterprises.

In our opinion, a leading role in this work should belong to industrial enterprises possessing much production experience, engineering cadres and possibilities of training kolkhoz members and sovkhoz workers in industrial specialties.

An important reserve for increasing the effectiveness of use of labor resources and growth of labor productivity in agriculture is to be found in improvement of organization of labor and its norm setting and in elimination of losses of worktime on sovkhozes and kolkhozes.

Beginning with 1974, the introduction of NOT measures has been done on sovkhozes on the basis of a state plan, as a result of which conditional release of 50,000-55,000 workers is provided, which is the equivalent of raising labor productivity by 0.6-0.7 percent. This work, however, has not been sufficiently widespread and, on the basis of statistical reporting, 70-75 of each 100 sovkhozes have not for the most part engaged in it because of an underestimation of its importance.

Beginning with the 11th Five-Year Plan, new targets for introduction into production have been assigned to kolkhozes and sovkhozes in the five-year and annual state plans of economic and social development of the USSR:

for specialized detachments (complexes) for the harvesting of grain crops, potatoes, sugar beet and other crops;



for mechanized links with job contract plus bonus wage payment system and a lump advance before calculations of a grown crop;

for standard labor-organization charts in animal husbandry;

for holding of two jobs or positions;

for progressive labor and rest conditions in animal husbandry (two-shift work, two-cycle arrangement of the day).

In addition, the introduction of other NOT measures can be provided through sectorial plans (plans of ministries) and through plans of kolkhozes and sovkhoses. A large number of highly effective scientific developments and recommendations relating to different directions of scientific labor organization and management of production has been developed by agricultural scientific-research organizations and approved by ministries or their technical councils. Their introduction through plans of ministries, kolkhozes and sovkhoses would contribute to a significant reduction of manual labor and to improved efficiency in the use of labor resources.

Ministries of agriculture, food industry and others that have sovkhoses under them and their local administrative organs in our view should raise the level of supervision of work on improvement of labor organization at kolkhozes and sovkhoses and in planning provide for the broad encompassment of workers with NOT measures and unconditional fulfillment of prescribed plans.

Questions of regulation of the labor and rest conditions of workers engaged in crop production and in animal husbandry require the special attention of ministries, all local agricultural administrative organs, heads of kolkhozes and sovkhoses and public organizations. These problems are most acute in animal husbandry where most of the permanent sovkhos workers and kolkhoz members are employed. At the same time, the advanced practice of many kolkhozes and sovkhoses shows that in animal husbandry a five-day week with two days off and two-shift work in crop production and animal husbandry and other efficient labor and rest conditions could be successfully introduced. For example, at Moskalenskiy Sovkhos in Omskaya Oblast, the following order of the day has been established for operators of machine milking of a dairy complex ranging up to 1,200 cows and where twice-daily milkings are employed: start of work at 5:30, end of first cycle of work--9:18, a break from 9:18 to 17:00 hours and then the second cycle of work from 16:00 to 21:00 hours. The two chief machine-milking operators have one replacement, that is, after four days of work, these workers get two days off. Length of workday is 8 hours 48 minutes, which permits the maintenance of the established worktime norm (calculated at 41 hours per week). In care of livestock, operators at this sovkhos work three shifts because the care of animals, particularly removal of manure, requires work around the clock. The three regular operators have one replacement; after each six days, a worker gets two days of rest. Convenient labor and rest conditions have been established for tractor and machine operators engaged in doling out fodder: their work day continues from 8:00 to 12:00 and from 14:00 to 18:00 hours; after six work days, they get two days off according to a schedule.

But such experience spreads slowly. Many animal-husbandry farms still use the one-shift method; here the workday of the milkmaids is 15-17 hours long (with two breaks); in the course of the year many of them work more than 300 days, that is, they work practically without days off or vacations. In some oblasts of the RSFSR (for example in Bryanskaya, Vologodskaya, Novgorodskaya, Yaroslavskaya, Ul'yanovskaya and Rostovskaya oblasts), operators of machine milking of cows work 320-340 days a year. Such a high amount of work sharply reduces the attractiveness of such labor and serves as one of the serious factors in cadre turnover. But in 1978, the RSFSR had a two-cycle arrangement of the day for 21 percent of the milk maids and two-shift work only at 4 percent of the sovkhozes and kolkhozes. The present establishment for sovkhozes and kolkhozes of targets in NOT plans for the introduction of progressive labor and rest conditions in animal husbandry should contribute to the elimination of these defects.

An important role in increasing efficiency of labor is played by its norm setting and improvement on the basis of introduction of technically valid norms of production, especially intended for intersectorial and sectorial normative materials for the norm setting of the labor of workers. An increase in the relative share of these norms, for example, in animal husbandry on sovkhozes and kolkhozes of Volgogradskaya Oblast to 96 percent (by 17.4 percent compared to 1977) made it possible to conditionally release about 10,000 persons with a wage fund of 17.7 million rubles. The economy of outlays of labor from the introduction of these norms for machine operators in Lithuanian SSR amounted to 15 percent.

But at many union republics, the relative share is still very low of technically valid norms computed on the basis of intersectorial and sectorial norms: in the BSSR, 51.6 percent of tractor and machine operators on sovkhozes on the basis of such norms and only 35 percent on kolkhoz; the figures for animal-husbandry workers are 25.8 percent and 13.4 percent, respectively.

Presently existing intersectorial and sectorial normative materials for the norm setting of labor of workers make it possible to encompass about 90 percent of workers engaged in crop production and up to 70 percent in animal husbandry.

Sovkhozes and kolkhozes have large losses of labor because of nonfulfillment of production norms. A study of this problem shows that in animal husbandry, for example, about 50 percent of kolkhoz members and sovkhoz workers fulfilled their norms below 100 percent. The number of workdays in which production norms were not fulfilled for tractor and machine operators and for workers engaged in manual labor amounted to roughly 40-50 percent of the total number of worked man-days.

Calculations show that the elimination of these losses would be the equivalent of a labor economy of 550,000-600,000 average yearly workers.

The chief cause of nonfulfillment of norms of output lies in defects of organization of labor and much idling of equipment because of breakdowns and a low level of maintenance of the operating units.

At many sovkhoses and kolkhozes in Belorussian SSR in 1979, losses of worktime during sowing of grain and leguminous crops amounted to 19-30 percent and in the harvesting of grasses, grain crops, sugar beet and potatoes--25-30 percent of the duration of a shift.

On sovkhoses and kolkhozes of the RSFSR worktime losses on the average amount to 16 percent and in tractor and transport work--11 percent. They are particularly big during harvesting. During this time the relative share of days with fulfilled production norms or up to 80 percent reaches 20-24 percent and in harvesting of sugar beet on kolkhozes--34 percent of the total number of days worked in the performance of these operations.

Nonfulfillment of production norms in agricultural work results in delays of their performance and in the end to a lower level of yield of agricultural crops and losses of the already grown harvest. Moreover for this reason there is a significant increase of the shortage of manpower at kolkhozes and sovkhoses and in the need for bringing in to agricultural work workers from other sectors of the national economy. The latter's share in total outlays of labor is growing. But the labor productivity of brought in workers is significantly lower than among sovkhos workers and kolkhoz members. For this reason the increased effectiveness of utilization of these workers is extremely important not only for agriculture but also for the industrial enterprises that send their workers to the farms.

The experience of many kolkhozes, sovkhoses and industrial enterprises shows that effectiveness of use of brought in workers increases significantly there where such work is performed on the basis of long-term contracts of kolkhozes and sovkhoses with industrial enterprises and organizations on the basis of planning calculations of manpower requirements. Contracts specify a concrete list of agricultural operations, the extent and times of their performance, the responsible persons for organization of the work and the condition of labor discipline and the commitments of an industrial enterprise for the timely and qualitative performance of the work as well as the obligations of the kolkhoz or sovkhos in regard to questions of creation of the necessary production, housing, cultural and everyday conditions and the material stimulation of the labor of brought in workers.

An important condition of growth of labor productivity is the vocational skill of cadres, their difference and performance.

The introduction of industrial technology in agricultural production presents new demands for the forming of a vocational-skill structure of cadres in agriculture. At the present time, a system of vocational training of workers for agriculture has been established. Special attention is paid to the training of machine-operator cadres. Just in four years of the 10th Five-Year Plan 5,424,000 of them were trained. But the availability of these cadres to kolkhozes and sovkhoses is not being improved. Selective surveys show that many kolkhozes and sovkhoses have fewer than 100 tractor operators per 100 tractors. Consequently there are not enough of them on many farms to operate the equipment on one shift. It is necessary to significantly raise the level of the actual training of specialists. At the present time, a significant portion

of machine operators is trained directly at kolkhozes and sovkhoses where the teaching base is poorly developed and the quality of training is significantly lower than at vocational-technical schools; at many farms, instead of broadly educated specialists, tractor operators are trained who are only capable of transport work.

The industrialization of animal husbandry requires without further delay expanded training of qualified cadres for animal husbandry that are able to effectively use the new equipment. But in rural vocational-technical schools (RVTS) insufficient cadres are trained for animal husbandry.

It would be advisable in the immediate years ahead to significantly expand training of qualified workers at RVTS, especially tractor and machine operators and animal-husbandry operators, at RVTS. The training of worker cadres should also be expanded at RVTS within the program of general secondary education. At the present time, a significant part of the graduates of general educational schools enter production without special training. For the training of workers of other occupations, it is necessary in addition to vocational-technical schools to set up large, well equipped interfarm course-teaching combines, the network of which at the present time is unfortunately poorly developed.

Growth of labor productivity is directly connected to raising the skill level of workers. Investigation of this question showed that in highly qualified workers production and other indicators of work (yield of agricultural crops, productivity of animals) are as a rule 10-15 percent higher. But at kolkhozes and sovkhoses insufficient attention is paid to growth of the workers' skill, especially animal-husbandry workers. Of the total number of animal-husbandry workers only 10-15 percent have received the title of master 1st or 2nd class.

It would be advisable for the USSR Ministry of Agriculture to specially study the question of improvement of work at sovkhoses and kolkhozes in connection with raising the qualifications of worker cadres, paying special attention to the broad development of such a form of raising of qualifications of worker cadres as a school for the study of advanced techniques and methods of work.

In our opinion, greater attention must be paid to providing training of workers and kolkhoz members with second agricultural vocations, especially the vocation of machine operators and also industrial specialists for work in industrial shops and subsidiary enterprises at kolkhozes and sovkhoses. Checks show that sovkhoses, kolkhozes and interfarm agricultural enterprises have a reserve of tractor and machine operators from second vocations amounting to only 5-10 percent of the total number of these workers.

The problem of providing cadres of specialists for management of production subdivisions of sovkhoses and kolkhozes--sections, shops, animal-husbandry farms, brigade repair shops--calls for accelerated solution. While among management personnel of sovkhoses and kolkhozes (directors and chairmen, chief specialists) as well as specialist-technologists (agronomists, livestock specialists, veterinarians), the great majority have higher or secondary specialized education, 35 percent of those heading sections and animal-husbandry farms on sovkhoses



are there by reason of practical experience; for persons heading repair shops on sovkhozes and kolkhozes, the figures are 35 percent and 51 percent, respectively. Approximately 57 percent of the brigades at sovkhozes and kolkhozes are still headed by persons without a specialized education.

In 1977, the government implemented measures for stimulating the transfer of specialists to work as heads of brigades, sections and animal-husbandry farms. In the past period, the number of specialists heading brigades at kolkhozes and sovkhozes grew by 65,800 persons, which made it possible to additionally bolster 18.6 percent of the brigades with specialists. But such a tempo of saturation with specialists of subdivisions of the middle echelon of management is inadequate, since it won't be possible to fully solve the problem of middle-echelon cadres until the end of the 11th Five-Year Plan.

The correlation at the present time of specialists of middle and higher qualification in agriculture is hardly efficient inasmuch as the number of middle-echelon specialists at sovkhozes and kolkhozes comprises only 60 percent of the total number of specialists. The accelerated availability to sovkhozes and kolkhozes of middle-qualification specialists would contribute to the creation of necessary conditions for efficient utilization of specialists of agriculture at kolkhozes and sovkhozes.

The decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Economic Stimulation of Production and Procurement of Agricultural Products" adopted in November 1980 is of major significance for boosting of the efficiency of the labor of rural workers.

This decree, in addition to measures for expanding the rights of heads of farms and improving the planning of production and purchases of agricultural products, introduces an essentially new system of economic stimulation of farms and payment of bonuses to sovkhoz workers. According to it, the chief criterion for evaluating the production activity of farms is improvement of end results and quality of work, namely increase in the production and purchases of agricultural products compared to the average yearly level attained in the last five-year plan. The stronger connection of stimulation of workers to end results of labor will undoubtedly contribute to increasing the labor activity of collectives of sovkhozes and kolkhozes. "The success of all plans and all programs," L.I. Brezhnev stated at the 26th CPSU Congress, "depends on attitude toward work, on the conscientious work of rural workers, which means on the system of moral and material stimulation."<sup>4</sup>

Such in our view are the basic guidelines for improving the use of rural labor resources at the present stage.

All-out improvement of the use of rural labor resources will contribute to the solution of one of the fundamental tasks of economic and social development of

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4. Ibidem, p 47.

the country for 1981-1985 and for the period to 1990--assurance of the most efficient use of material, labor and financial resources as the most important conditions for improvement of the balanced development of the national economy and the creation of required reserves.

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## LABOR

### INTERRELATIONSHIP BETWEEN LABOR, MEASURES TO REWARD LABOR

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 82 pp 95-99

[Article by Prof S. Dzarasov, doctor of economic sciences: "Interrelation of Labor Measures and Measures of Rewarding It"]

[Text] An Important Guideline for Improving the Economic Mechanism

In the process of improving the economic mechanism, we run into a broad range of important problems, but it is not always clear in what relation they are to each other. Thus, no one will deny the importance of acceleration of technical progress, improvement of the sectorial structure, raising of the quality of production and of production efficiency, economy of raw and other materials, power and other resources. But the question is what conditions predetermine the solution of these problems. We assume that such a basic question is the relation of man to labor, which is affected by the relation of labor measures to measures of rewarding it.

Mankind's progress is the result of labor. Labor is an unfailing source of material and spiritual wealth. V.I. Lenin linked the new social order to man's new relation to labor. In the first years of the Soviet power, he wrote: "... The proletariat constitutes and realizes a higher type of social labor organization than capitalism. This is the crux of the matter. In this source lie the strength and guarantee of the inevitable total victory of communism."<sup>1</sup>

This thesis of V.I. Lenin is of principal importance for the solution of the problems of improving the economic mechanism facing us. The socialist revolution accomplished radical changes in the system of public economy. In abolishing private property and establishing public ownership, it inspired confidence in people that from now on they would work not for the purpose of enriching exploiters but for themselves. As a result of this, the attitude of people changed toward labor, which now was the source of the greatest labor enthusiasm, successes attained on the road to the building of socialism.

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1. V.I. Lenin, "Poin. sobr. soch." [Complete Works], Vol 39, p 13.

Attitude toward labor constitutes a very basic element of socialism's economic structure. Success depends on with what quality workers fulfill their duties. Consequently, a strategically important reference point in improvement of the economic mechanism is to be found in the development and introduction into practice of such norms and conditions of work as ensure a conscientious attitude toward labor. The solution of remaining tasks is possible only in the presence of this basic prerequisite.

As was noted above, the economic foundation of a conscientious attitude toward labor was the establishment of public ownership. It presupposes the existence of a corresponding system of rewarding labor in which, first, all sources and forms of nonlabor income are excluded and, second, a most strict relation is observed between the measure and the reward of labor.

Level of activity in labor and management, responsibility of workers for the results of economic activity and interest in them are closely interrelated and constitute most important elements of the economic mechanism of socialism. At the 26th party congress, as well as at the November (1981) Plenum of the CPSU Central Committee, the necessity was pointed out for further improvement of the economic mechanism. L.I. Brezhnev stated at the Plenum: "... In working on the fulfillment of the five-year plan, we have to improve at the same time the economic mechanism and the system of managing the economy."<sup>2</sup> Under these conditions, boosting of labor efficiency through the establishment of a close connection between its measure and reward is of primary importance.

#### Prestigiousness of Labor Under Socialism

Prestigiousness of labor serves as the basis for a higher type of social organization of labor under socialism. And, in fact, with the establishment of public ownership and equal right and obligation to work, the attitude of workers toward their work radically changed. The outstanding successes of socialism are connected to this. At the same time, against the background of the achievements of our economy there have been disclosed certain negative manifestations. Prestigious and nonprestigious forms of labor have arisen.

Theoretically, under socialism there should not be any nonprestigious forms of socially useful activity. All socially necessary forms of labor are identically prestigious. The prestigiousness of labor under socialism is determined not by the kind of work, vocation, position or title but by its usefulness to society, quality and conscientiousness regardless of the sphere of application.

But in practice, some forms of labor, essentially those that are little mechanized, do not enjoy esteem despite all their social importance. Noncomprehensiveness of mechanization of production signifies that the relative share of manual labor is still too high. "The root of evil," L.I. Brezhnev said at

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2. L.I. Brezhnev, "Rech' na Plenum Tsentral'nogo Komiteta KPSS 16 noyabrya 1981 goda" [Speech at the Plenum of the CPSU Central Committee on 16 November 1981]. Moscow, Politizdat, 1981, p 11.



the November (1981) Plenum of the CPSU Central Committee, "is slow reduction of manual labor. In industry as a whole, 40 percent of the workers are engaged in it and in construction and the service sphere--even more."<sup>3</sup> The bulk of manual labor is concentrated in auxiliary, loading and unloading work at large and small enterprises, in construction, transport, trade, sale, supply and other comparable organizations. The consequence of all this is lack of attraction and social lack of prestige of many forms of labor. No one, for example, will deny the importance for our society of construction workers, machine operators, animal-husbandry workers and the like. Nonetheless, we have a shortage of no less qualified workers in these specialties. At the same time, there are many specialties (positions) which people try to attain in every possible way.

If such manifestations acquire a mass character, a lack of balance occurs between the vocational structure of the work force and the social need for it. The cause lies in the shifting of prestige from some spheres of labor to others.

In our view, for the greater number of people, the attractiveness and prestigiousness of labor are determined by the income it brings. Such a conclusion is doubted by a number of sociologists and economists, who assert that in the present epoch the biggest importance in labor is the creative base, while in the selection of a vocation, people are guided not so much by the size of income as by the attractiveness of labor. We will not deny the importance of the creative principle in labor. There are to be found many people who will agree to lower pay in preferring that form of labor which provides them the biggest satisfaction. In the selection of labor activity, other factors are also of importance: prospects of growth, availability of free time, the atmosphere in a collective, conditions of social security and so on.

Nonetheless the decisive factor in the selection of a working occupation is the size of earnings (income). Since labor is the only source of existence for a worker and his family, the attractiveness of labor is indissolubly connected to its real income.

The efficiency of labor depends on the strict observance of the principle: the more significant the labor contribution, the greater the measure of its reward. The violation of this principle results in weakening of labor stimuli and slowing down of its productivity. It is therefore necessary to concentrate attention on overcoming the reasons resulting in the violation of the said dependence.

#### Dependence of Wages on Labor Productivity

We know that a condition of the creation of an efficient system of material stimulation is an advancing growth rate of labor productivity compared to the growth rate of the average wage. Unfortunately, the problem of such advancement has been insufficiently studied by science. It may be assumed that

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3. Ibidem, p 9.

the more strictly the dependence between the measure of labor and the measure of its reward is observed, the more significantly and stably would growth of the average wage be exceeded by the growth of labor productivity.

From this point of view, one would consider hardly satisfactory the advance observed in recent years in the national economy as a whole and in the sectors. In agriculture, an unfavorable situation has come into existence in recent years in this respect--the increase in pay has significantly outstripped growth of its productivity. Thus, average pay at kolkhozes had grown in 1980 55 percent over the 1970 level and at sovkhoses--48 percent, while labor productivity grew only 23 percent.

As shown in the table, industry shows a certain lead thanks to which labor productivity in the national economy as a whole is growing more rapidly than the average wage. But such a lead is insufficient for material provision of a rise in wages.

	(in percent of 1975)				
	Growth rate by years				
	1976	1977	1978	1979	1980
Labor productivity	3.0	7.0	11.0	14.0	17.0
Average monthly wage	4.5	6.6	9.0	11.2	14.3

At the same time, the conditions of socialist expanded reproduction, as we know, dictate the necessity of observing certain proportions between the monetary income and expenditures of the population and the growth rate of wage and trade turnover. Without this, the system of material stimulation cannot operate with the necessary effectiveness.

The basis of the proportion and balance of the different sides of social reproduction constitutes growth of labor productivity. Its inadequate rate affects all sides of the economy's development. As a consequence of the fact that plan targets for growth of labor productivity were not reached during the 10th Five-Year Plan, growth of the average wage during 1976-1979 per percent of rise of labor productivity in industry amounted to 0.8 percent instead of 0.59 percent for the five-year plan.

Inadequate availability for the population of goods and paid services in the face of growth of its monetary income results in the increased size of postponed demand and has a negative effect on the material interest of workers in increasing labor productivity. What is the solution? In our view, the answer to the raised question lies in the establishment of a close dependence as possible between the measure of labor and the measure of its reward and in the systematic realization of the basic principle of socialism "from each according to his

ability, to each according to his labor." "Our system of material and moral stimuli," L.I. Brezhnev said, "must always and everywhere assure a just and objective assessment of each one's labor contribution."<sup>4</sup>

Unfortunately, this is not always adhered to in practice. In many cases wage size is determined not only by labor contribution but also by the type of employment. This applies especially to low-skill and unattractive forms of labor that are necessary to society, but it is impossible to interest workers in them without an increase in pay. In this is to be found one of the reasons for the fact that it rises without a corresponding growth of labor productivity. The growing lack of correspondence between the money available to the population and its goods coverage weakens material stimuli.

The decree of the CPSU Central Committee and the USSR Council of Ministers on improving the economic mechanism provides certain measures for increasing dependence of growth of wages on increased labor productivity. At the same time, certain questions are in need of further working out. The process of improving the economic mechanism in our view requires the establishment of a more direct dependence between labor productivity and wages and the profit of a collective and its labor contribution. Wages can be increased only with the existence of surpassing growth of labor productivity, while the source of its bonus portion should serve for the bonus obtained by the collective. In the absence of labor productivity outstripping the medium wage including the bonus from the material incentive fund, the system of stimulation cannot be effective.

It is important to refine the method of determining the indicator of labor productivity for the purpose of having it reflect more fully the contribution of the worker and the collective as a whole. At the present time, in connection with the introduction of the indicator of normative net production (NNP), the transition is beginning to computation of labor productivity on its basis. Such a method has definite advantages, especially at the national-economic level since the growing share of used means of production in gross production will increasingly distort the real size of the end result.<sup>5</sup> From this point of view, the use of the indicator of net production, reflecting more accurately the extent of labor outlays (labor contribution), is economically justifiable. Its introduction at different levels of management stimulates growth of the labor contribution of each collective. The difference between them is determined not only by the quantity but also by the quality of the obtained result.

For example, the results of the operation of a number of associations of the USSR Ministry of Instrument Making, Automation Equipment and Control Systems, which has been using since 1981 the indicator of normative net production,

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4. L.I. Brezhnev, "Leninski kursom" [Leninist Course], Vol 8, Moscow Politizdat, 1981, p 702.

5. See: PLANOVOYE KHOZYAYSTVO, No 10, 1981, p 94.

show that the growth rate of the latter was higher than the growth of commodity production. Here and there interest of associations was noted in overfulfilling the plan for net production compared to the output of commodity production. The reason is that the relative share of normative net production in the wholesale price of different items fluctuates from 30 to 90 percent. Deviation of norms from actual expenditures is also of major importance. From this stems the difference in advantage of products from the point of view of producing a large volume of normative net production. This contradiction convinces one that the preference of some one indicator cannot produce the sought for solution. It is good that normative net production stimulates economy of means of production, but it is important for it to be accompanied by a corresponding growth of production output in physical terms.

Analysis of the results of the operation of the association of the Ministry of Instrument Making, Automation Equipment and Control Systems discloses still another circumstance of considerable importance. Inasmuch as normative net production has made its own expenditures advantageous, associations have begun to show an interest in the fabrication of labor-intensive products, particularly spare parts. Formerly the necessary interest did not exist in their production and consequently they were consistently lacking. Today the aforesaid shortage is being overcome in associations of the Ministry of Instrument Making, Automation Equipment and Control Systems. This is a positive result of the introduction of normative net production. But another factor deserves attention: interest is weakening in putting out products with a high relative share of competent items. The reason is understandable: the interest in products with a significant share of own expenditures weakens the interest in the production of products with a large relative share of outlays of past labor. This is an example of how the labor contribution differs from labor outlays. The labor contribution, as was noted, is determined not only by production outlays but also by the end result, the production of which in the given case is connected with the use of component items.

The cited conclusions show that the volume of normative net production can grow faster than commodity production. The documents of the 26th CPSU Congress point out the need of growth of production output outstripping growth of production outlays. Consequently, growth of production output in physical terms requires constant attention. If labor production is measured on the basis of net production not only at the final national-economic level but also at the level of enterprises and associations, that is, on the level of operational administration, underestimation of the end result is possible.

The question arises in this connection: would it not be more advantageous to measure labor productivity at the national-economic level on the basis of net production and on the level of the initial level--on the basis of commodity production? Objection is usually raised to such an idea on the basis of the fact that for the purpose of coordination of indicators, each of which must be single and continuous at all levels of the operation of the economy. A similar objection brings to the fore ideas of statistical reporting convenience without taking into account the contradictions that really exist in economic life. The real fact of the matter is in particular that the interests of



society and the collective do not always coincide. It is therefore necessary to combine the operation of different factors affecting the satisfaction of the interests of society and the collective.

Because of the contradictoriness of economic reality, it is impossible to find an all-encompassing indicator. When introducing an indicator for the solution of a concrete problem, it is also necessary to use with it or in addition to it another for accounting the other side of the matter in order to combine interests and tendencies of different levels. This means that in addition to the indicator stimulating economy of past labor a stimulator is needed for the production of quantity and quality of commodity production.

We think at the level of enterprises and associations calculation of labor productivity on the basis of commodity production should not be totally rejected. Calculation of labor productivity at enterprises and associations on the basis of commodity production will create in the collective an interest in adherence to a products list corresponding to the needs of society. The fact is that for an end effect not only the level of expenditures but also the quantity and quality of manufactured products are important.

#### Strengthening of Labor and Economic Discipline

An important element of improvement of the economic mechanism is the creation of conditions for strengthening of labor and economic discipline and raising the accountability of rank-and-file and supervisory personnel for the fulfillment of their duties and for holding to a minimum losses of worktime.

In December 1979, the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU adopted a decree "On Further Strengthening Labor Discipline and Curtailing Cadre Turnover in the National Economy." But the measures specified in it are not being carried out sufficiently energetically. In our opinion, the reason for this is the fact that an atmosphere and conditions for strengthening of labor discipline have still not been created at enterprises. Planned targets are essentially fulfilled despite violations, the struggle against which is a troublesome matter and does not always bring about the desired results. Furthermore, heads of enterprises prefer to keep on their staffs extra employees for the possibility of "emergency situations."

Labor discipline can be strengthened through expansion of the rights of collectives of enterprises in determining the permanent number of personnel. Under the existing procedure, the possibilities of the collective are restricted by observance of the limit on number; at the same time, it is not the limitations that are considered most correct but rather the possibilities of the collective to regulate the number of workers in such a way as to obviate the need of hiding reserves and, most important, to ensure an advancing growth of labor productivity over the growth of the average wage. In this connection, it should be permitted to raise wages by more than 50 percent and to remove other limitations interfering with the development of creative initiative. But growth of labor productivity in physical terms and raising of labor productivity with a fewer number of workers should be demanded of the collective.

As shown by the Shchekino experiment, the experience of the brigade contract and the use of other forms of advanced organization of labor, it is not enough just to declare progressive principles. The main thing is to create conditions for their introduction and development and to interest the collective materially and morally in their accomplishment. This evidently requires a closer tie-in of the wage fund and the size of produced profit with the end result--growth of output of production and improvement of its quality. This is often referred to as well as the need for increasing the responsibility of the collective, but the necessary conditions are not always created. The difficulty lies in revising certain ideas, which have persevered by force of inertia but no longer correspond to the changed circumstances.

Is it true, for example, that wages should be guaranteed in advance in their entire amount and almost do not depend on the results of the collective's work? In our opinion, the basic portion of the wage, such as about 70 percent of the present level, should be guaranteed, while the size of the other part should be made dependent on growth of production output and reduction of production cost. With an appropriate lead in growth of labor productivity over growth of the average wage, restriction of the latter can hardly be justified. True, the realization of the indicated dependence presupposes a significant expansion of the economic independence of collectives of enterprises and associations. But without this it would be impossible to increase their accountability.

Expansion of economic independence and greater responsibility of collectives are essential conditions for strengthening of labor economic discipline. The right to labor is a great social achievement of our society, but citizens are accordingly obliged to work conscientiously. In the USSR Constitution (article 60) it states: "It is the duty of, and a matter of honor for, every able-bodied citizens of the USSR to work conscientiously in his chosen, socially useful occupation and strictly to observe labor discipline."

The question arises: does a citizen have the right to labor who work unconscientiously and violates labor discipline? We suppose that a collective can and should fire such a worker; society is not obliged to observe in regard to him the requirements of labor legislation as long as he does not consider labor as a duty to be conscientiously fulfilled. Society, every collective and every honest worker are interested in this. So far one part of mutual guarantees is carried out in our society: each person has a place of work and corresponding earnings. But necessary control is not exercised over the quality of work; it is regulated for the most part by the conscience of workers. Frequently, as was noted at the 26th CPSU Congress, a worker is paid for coming to work without account being taken of his contribution to the common cause.

For this reason collectives together with trade unions should be granted more rights in the field of control over the quality and conscientiousness of work. Taking into consideration the fact that to increase earnings it is necessary to get along with a fewer number of workers, each collective must resolve on its own the above-mentioned questions. This will promote the development of collectivism and the participation of workers in management. The work atmosphere will change and it will become an important disciplining factor. Shirkers and idlers will be deprived of the possibility of hiding behind constitutional guarantees and shifting the main burden of the work on the shoulders of conscientious workers.

Increased responsibility of collectives over the results of economic activity and increased dependence of labor revenues from the results of production are likewise necessary in the struggle against such antisocial occurrences as insertions and other reporting violations, thefts of public property and the use of official position for sordid ends. The success of this struggle in large part is connected to increasing the stimulating role of wages.

The work of the collective should be judged by its results. If they are considered from the point of view of satisfaction of social needs, then the degree of conscientiousness of the labor of each member can be determined by his contribution to the common cause. The collective must likewise possess broad rights for evaluating the work of each of its member, from the rank-and-file worker to the head for either rewarding or punishing them.

The all-out development of the sense of proprietors of production among rank-and-file and supervisory personnel serve as an important source for the development and strengthening of the socialist economy.

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## LABOR

### ASSIGNMENT, TRAINING OF YOUNG SPECIALISTS DISCUSSED

Riga SOVETSKAYA LATVIYA in Russian 5 Mar 82 p 2

[Article by I. Kuzin, chief of the division of personnel and assignment of young specialists of the LaSSR Ministry of Higher and Secondary Specialized Education: "Attention to Young Specialists"]

[Text] An important task of the higher school is continued improvement in the training and ideological and political education of specialists and fully meeting the requirement for them in all fields of production, science and culture. In the last five-year plan, the VUZ's of Latvia trained 31,400 specialists. The first year of the 11th Five-Year Plan has been successfully completed--the plan to turn out specialists has been overfulfilled. Our VUZ's now are training specialists in 124 specialties, basically meeting the requirement of the republic's national economy for specialists.

The party's course toward production intensification requires that every VUZ graduate be assigned to the work sector where the skills and knowledge he has received are needed, where his labor will yield the largest return. In the CPSU Central Committee and USSR Council of Ministers decree "On further development of the higher school and improving the quality of specialists' training," VUZ's have been set the task of shifting future specialists to early assignment, long before they finish an educational institution.

At present, the republic's Gosplan and the LaSSR Minvuz [Ministry of Higher and Secondary Specialized Education] are actively carrying out work on the transition to assignment of graduates 2 years before they finish an educational institution, and the additional requirement of the national economy for specialists is being determined for 1983 and 1984. We are studying the experience of the country's VUZ's which have shifted to such a procedure. Implementation of the party and government decree will create the necessary conditions for further development of special-purpose training of personnel and a sounder profiling of their education. These tasks have been taken into consideration in the statute on personnel assignment of VUZ graduates put into effect 1 September 1980.

However, the experience of last year has shown that many sectorial ministries still are not prepared to begin assignment of young specialists 2 or 3 years before they have finished an educational institution. They are determining the additional requirement for specialists in the meantime "by eye," as they say. Last



year, for example, a number of ministries and departments (including the LaSSR Ministry of the Food Industry and others) refused to accept 84 specialists because of the lack of a position. With enviable ease, individual ministries and departments let other enterprises and organizations have the specialists allocated for them. A similar practice is disrupting the plans for the advance assignment of graduates, disorienting them. In order to eliminate such shortcomings, it is necessary to examine the obsolete regular scheduling of ITR's [engineering and technical personnel] for industrial enterprises. Ways of resolving this problem were indicated in the USSR Council of Ministers decree 'On improving the planning of specialists' training and improving the utilization of graduates of higher and secondary specialized educational institutions in the national economy."

This decree sets ministries and departments the task of developing and approving in an established procedure the sectorial methodical instructions for determining the requirement for specialists, as well as scientifically sound norms for saturation of sectors of the national economy with specialists. It is necessary to complete training more rapidly and, in agreement with the USSR Goskomtrud [State Committee for Labor and Social Problems], to approve a model list of positions to be filled by specialists with higher education. Unfortunately, this work is being carried out extremely slowly.

It is necessary to change the personnel ordering system for the transition to assignment of young specialists 2 to 3 years before they finish training. As practice shows, direct contracts between a VUZ and a ministry or department on the training of specialists within the approved plan for assignment of graduates are one of the effective means here. Such a procedure will make it possible for VUZ's to conduct specialization in conformity with the requirement of one enterprise or another. Contract relations, of course, must be covered in legal form.

For the present, the provision of housing for young specialists remains a serious problem. Ministries and departments are not resolving this problem satisfactorily at this time. When an application for young specialists is presented, the majority of enterprises, construction projects and organizations confine themselves to registration "without assignment of living space." Thus, of the graduates of our ministry's VUZ's last year, only 10 percent of those who needed them were provided places in dormitories. VUZ commissions for assignment of young specialists were compelled to send 438 graduates to those ministries and departments which still provide living space, frequently to the detriment of their specialization. Obviously, it is necessary in the planning procedure to develop construction of sectorial and intersectorial dormitories for young specialists who are unmarried or have small families.

At times the demand for ITR personnel "is solved" by assigning persons who do not have a higher education to engineering positions. At the same time, they pay the specialists who have finished a VUZ and a tekhnikum an identical salary. All these problems are being hotly debated among young specialists and reduce the prestige and creative activity of graduates. More concern should be accorded young specialists at those enterprises where they come to work. Where they are accorded attention from the management and public organizations from the first day, the problems of consolidating specialists and more efficiency in their work do not arise. The VEF [Riga State Electrotechnical Plant], "Al'fa," and "Olaynfarm" associations and other enterprises are examples of such a relationship.

For example, in the VEF association, on-the-job training of young specialists has been well organized, and they are actively included in competition "For higher quality of work in each work place." Young specialists at the VEF have received widespread supervision over the most important orders which the association fulfills. The association's council of young specialists looks after the scientific growth of recent VUZ graduates and conducts a scientific and technical conference with their participation each year.

However, such an attitude toward young specialists cannot be praised everywhere. Organization of on-the-job training of VUZ graduates gives rise to an especially large amount of criticism. Its basic aim is to reduce the period of time for young specialists to adapt to production conditions and in the work place, to reinforce practical and organizational skills, and to improve theoretical knowledge obtained in the VUZ. However, a number of ministries and departments are permitting reduction of the time for on-the-job training and are not providing the young specialists with supervisors. Frequently, even particular plans for conducting on-the-job training are lacking locally. Similar violations have taken place in the system of the State Committee for Vocational and Technical Education, in the "Latgiprobyst" institute, the Ministry of Local Industry, and a number of other departments and enterprises in the republic.

All these shortcomings are the result of a poor relationship between the industrial enterprises and organizations and the VUZ's. Educational institutions have developed the necessary documentation for organizing and conducting on-the-job training. It is necessary to utilize these materials widely, and through the joint efforts of VUZ's, ministries and departments, to get rid of formalism, thereby contributing to improvement in the quality of specialists' training and their consolidation in the national economy.

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# EDUCATION

NUMBER OF GENERAL AND SPECIAL EDUCATION SCHOOLS AND GRADUATES AT THE BEGINNING OF THE 1980-81 ACADEMIC YEAR LISTED

Moscow VESTNIK STATISTIKI in Russian No 12, Dec 81 pp 51-73 (excerpt pp 67-68)

7. General Education Schools at the Beginning of the 1980/81 Academic Year				
	Number of schools	Pupils in them, thousands of people	Number of graduates from 8-year general education schools in 1980, thousands of people	Number of high school graduates in 1980, thousands of people
USSR.....	144,964	44,275	4,270	3,966
In particular for the cities:				
Alma-Ata.....	178	134	11	11
Ashkhabad.....	66	54	5	3
Baku.....	381	272	28	22
Vilnius.....	84	71	6	6
Gor'kiy.....	209	162	14	15
Dnepropetrovsk	173	140	12	14
Donetsk.....	185	131	13	13
Dushanbe.....	116	92	8	6
Yerevan.....	235	162	16	13
Kazan'.....	169	128	11	13
Kiev.....	305	288	22	26
Kishinev.....	80	67	5	5
Kuybyshev.....	198	153	13	15
Leningrad.....	654	485	42	36
Minsk.....	187	179	15	17
Moscow.....	1,188	849	75	72
Novosibirsk....	225	172	15	14
Odessa.....	139	128	10	11
Omsk.....	181	139	12	13
Perm'.....	158	126	11	10
Riga.....	142	105	9	8
Sverdlovsk.....	202	161	13	13
Tallinn.....	75	63	5	4
Tashkent.....	323	303	27	22
Tbilisi.....	217	173	15	13
Ufa.....	147	126	12	12
Frunze.....	83	76	6	6
Khar'kov.....	190	178	15	16
Chelyabinsk....	179	143	12	13

**8. Higher and Mid Level Special Education Institutions at  
the Beginning of the 1980/81 Academic Year**

	Number of Higher Educational Insti- tutions	Students in them, Thousands of People	Number of Graduates from Higher Educational Institu- tions in 1980, Thousands of People	Number of Mid Level Special Education Insti- tutions	Pupils in Them, Thousands of People	Number of Graduates From Mid Level Special Education Institu- tions in 1980, Thousands of People
USSR.....	883	5,235.2	817.3	4,383	4,611.7	1,274.7
In particular for the cities:						
Alma-Ata.....	16	88.9	12.7	17	27.4	7.4
Ashkhabad.....	6	27.5	4.3	14	18.2	5.0
Baku.....	13	87.7	14.5	26	40.5	11.4
Vilnius.....	6	32.6	5.0	15	19.6	5.9
Gor'kiy.....	10	63.2	9.7	25	41.0	11.3
Dnepropetrovsk	9	59.5	10.0	29	37.6	10.9
Donetsk.....	5	44.1	7.6	22	30.5	8.7
Dushanbe.....	8	43.1	6.8	13	18.2	5.0
Yerevan.....	11	53.7	9.7	26	26.8	8.9
Kazan'.....	11	65.4	10.5	21	27.2	7.7
Kiev.....	18	147.9	26.2	41	62.0	17.8
Kishinev.....	6	41.6	6.5	17	22.8	7.2
Kuybyshev.....	10	62.4	9.9	28	39.8	10.3
Leningrad.....	41	280.3	42.1	87	110.5	30.6
Minsk.....	14	95.7	17.2	23	34.5	10.3
Moscow.....	76	631.9	93.6	139	201.9	54.6
Novosibirsk...	14	84.5	12.5	36	39.3	10.9
Odessa.....	15	86.4	14.1	26	34.5	10.0
Omsk.....	10	51.1	7.3	29	34.3	10.3
Perm'.....	7	50.0	7.6	20	24.5	6.5
Riga.....	7	35.1	5.3	22	26.6	7.2
Sverdlovsk....	14	87.4	13.3	35	46.8	12.7
Tallinn.....	4	13.8	1.9	12	13.3	3.3
Tashkent.....	19	147.1	23.1	36	52.4	13.4
Tbilisi.....	11	66.0	11.1	25	21.4	6.3
Ufa.....	7	47.9	7.1	23	32.4	9.8
Frunze.....	8	44.5	6.7	14	22.5	6.0
Khar'kov.....	19	122.7	19.9	37	54.3	15.9
Chelyabinsk...	7	44.3	6.8	24	32.0	8.9

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## DEMOGRAPHY

### SCIENTISTS' MEETING REVIEWS POPULATION PROBLEMS

Moscow VESTNIK STATISTIKI in Russian No 1, Jan 82 pp 60-62

[Report from session of the Scientific Council of the USSR Academy of Sciences on Socioeconomic Problems of Population: "Problems of Demography and Manpower Resources Are Discussed"]

[Text] An out-of-town session of the "Socioeconomic Problems of Population" Scientific Council of the USSR Academy of Sciences, devoted to problems of population reproduction and an effective demographic policy in light of the 26th CPSU Congress decisions, was held in the city of Dushanbe in September 1981. Taking part in the work of the session were employees of the USSR Academy of Sciences and its branches, the USSR Gosplan and the TsSU [Central Statistical Administration] and their subordinate scientific institutions, the academies of sciences of union republics, higher educational institutions and scientific research institutes of a number of union republics, as well as members of the territorial sections of the Scientific Council.

K. Makhkamov, deputy chairman of the TASSR Council of Ministers and chairman of the TASSR Gosplan, greeted the session participants. In characterizing in detail the basic problems in the field of population reproduction and manpower resources which confront the republic's scientists, he noted that regional problems should be resolved from national economic positions, taking into account available experience, and expressed confidence that joint work by scientists and practical workers will make it possible to outline ways to carry out demographic policy more effectively.

In the opening address, T. Ryabushkin, chairman of the "Socioeconomic Problems of Population" Scientific Council of the USSR Academy of Sciences and corresponding member of the USSR Academy of Sciences, spoke about the tasks of scientist-demographers ensuing from the 26th CPSU Congress decisions. He emphasized that demographic policy should be examined as an organic part of the party and government social policy and in close relationship with further development and improvement of the Soviet people's way of life. Demographic policy in our country has a single direction corresponding to the tasks of overall social policy, but at the same time, it has features which take into account differences in the demographic situation among the country's regions as well.

G. Kiseleva delivered the report "Population Reproduction in the USSR: Trends and Problems," prepared by the Department of Demography of the Institute of Sociological Research of the USSR Academy of Sciences (authors were Doctor of Economic Sciences L. Rybakovskiy, Candidate of Economic Sciences G. Kiseleva, and Candidate of Economic Sciences V. Borisov), dealing with the basic problems associated with a decline in the birth rate, as well as mortality rate trend and factors and problems connected with increasing life expectancy. It is necessary to expand and intensify demographic research in order to work out an effective demographic policy. This is hampered, the speaker stressed, by insufficient coordination in scientific research and training of specialist personnel in a number of cases.

The report by Candidate of Economic Sciences L. Darakiy (Scientific Research Institute of the USSR Central Statistical Administration), "Basic Birth Rate Trends in the USSR," gave an analysis of the differential birth rate in dynamics, which demonstrated that the fundamental source of such differentiation is the time difference of the birth rate decline in various groups of the population, which is related in particular with the ethnic heterogeneity of the country's population. As research shows, the country's population is divided into groups in which a low birth rate has been stabilized and groups in various stages of birth rate decline. In explaining the causes of a low birth rate, the speaker pointed out that they are closely associated with a change in the nature and functions of the family and its way of life. Demographic policy can contribute to an increase in the birth rate in those groups where it is low and stable, but it is not likely to reduce the decline in those population groups where this decline still has not ended.

In the report of the Center for the Study of Population Problems of the MGU [Moscow State University imeni M. V. Lomonosov], "Theoretical Bases of the Conduct of Demographic Policy in the USSR" (authors were Doctor of Economic Sciences D. Valentey, Doctor of Economic Sciences A. Kvasha, Candidate of Philosophical Sciences A. Antonov, and Candidate of Geographical Sciences R. Tatevosov), which was delivered by A. Antonov, it was pointed out that long-range plans for development of the population and their implementation, which should be embodied in the formulation of special-purpose demographic programs, are needed to carry out the demographic policy. In this regard, an important task is concrete expression of the objectives of demographic policy and development of indicators of its economic and social effectiveness.

P. Zvidrin'sh (Latvian State University) delivered the report "Demographic Processes in the Soviet Baltic Republics and Problems of Demographic Policy" (authors were Candidate of Economic Sciences P. Zvidrin'sh, Doctor of Economic Sciences B. Mezghaylis, Candidate of Economic Sciences A. Merchaytis, and Candidate of Geographical Sciences K. Laas). In characterizing current features of the demographic situation in the Baltic union republics, he noted that a number of social measures to optimize it had been implemented in recent years. Conducting a sufficiently active demographic policy can lead to an increase in the birth rate, reduction of premature mortality and improvement in the intensiveness of population reproduction, as well as to reinforcement of marriage and family relations and improvement in the quality of the young generation's upbringing.

In the report "Problems of Population Reproduction and Manpower Resources in the Tajik SSR" by Doctor of Economic Sciences D. Karimov, Candidate of Economic Sciences V. Ponomarenko and Candidate of Economic Sciences O. Kositov, which was delivered by D. Karimov, deputy chairman of the TaSSR Gosplan, the demographic situation in the republic was discussed and problems associated with the efficient use of manpower were raised. Noting that high rates of increase in the republic's population and manpower resources will be maintained for a prolonged period, the speaker pointed out that in the very near future most of them should be directed into nonagricultural sectors. Opportunities for efficient use of manpower resources in the Tajik SSR in rayons with insufficient manpower have been limited by low population mobility and the difficulties of new settlers in adapting to new conditions. Drawing the republic's rapidly increasing manpower resources into public production is linked with improvement in the structure of the national economy, development of labor-intensive sectors of the light and food industry, the creation of agro-industrial complexes and siting industrial enterprises in small cities and urban-type settlements, and development of a system of training local skilled personnel from the native nationalities.

Speaking in the discussion of the reports, Candidate of Economic Sciences K. Mamedov (Scientific Research Institute of Economics of the AzSSR Gosplan) pointed to the need to examine demographic problems in close association with the economic ones; in order to explain existing mortality rate trends, work must be carried out in collaboration with medical personnel and results of the study must be reduced to practical recommendations.

The address by Candidate of Physico-Mathematical Sciences Ye. Andreyev (Scientific Research Institute of the USSR TsSU) was devoted to important problems of the dynamics of life expectancy in the USSR and an analysis of the causes of death in particular.

Candidate of Economic Sciences V. Perevedentsev (IMRD [International Workers' Movement Institute] of the USSR Academy of Sciences) spoke about the need to evaluate the possible demographic effect of different social and economic measures. For this it is important to improve the demographic training of operational and planning workers, to propagandize demographic knowledge among the population, and to efficiently utilize specialists in this field.

Candidate of Economic Sciences V. Borisov (ISI [Sociological Research Institute] of the USSR Academy of Sciences) noted that demographic science is still inadequately equipped with the materials and methods of research, specialist personnel are few, and they are not always utilized in accordance with their assignment. He called for further expansion of demographic research to develop well-grounded paths for demographic policy as one of the most urgent tasks.

A. Isupov, chief of the All-Union Population Census Administration of the USSR TsSU, called in his speech for scientific and practical workers to more broadly utilize population census materials, particularly the all-union population census of 1979. He also stressed the specifics of demographic forecasts as a means of analyzing the demographic situation and as a planning tool.



Candidate of Economic Sciences A. Volkov (Scientific Research Institute of the USSR TsSU) noted the importance of studying the vital activity of the family as the most important cell of society and an interdependent analysis of the reproductive, health and work behavior of persons in developing measures of demographic policy. Demographic policy will be successful if it is guided by thorough knowledge of the principles of demographic trends and takes its objective nature into account.

The speech by E. Vitolin'sh, deputy chief of the LASSR TsSU, was devoted to the effect of the mortality rate on the extent of average life expectancy and to an evaluation of a possible increase in the period of work activity when the individual causes of death are eliminated at an age when a person is able-bodied. Such an analysis provides the opportunity to determine the principal directions of prevention and treatment work.

Candidate of Economic Sciences P. Eglite (Institute of Economics, LASSR Academy of Sciences) opposed explaining the causes of the birth rate decline by the family's orientation toward a small number of children and non-family values. She familiarized the session participants with research results in accordance with which the majority of city-dwellers place the family, family happiness and children high enough among living values. As the investigation showed, P. Eglite emphasized, family and non-family orientations and values do not compete with each other.

Candidate of Philosophical Sciences S. Golod (Socioeconomic Problems Institute of the USSR Academy of Sciences, Leningrad) called for study of the family in the process of demographic transition in different regions; the methods of such a study should correspond to the specific nature of the object of study. Selective research on the nature and means of regulating the birth rate attests to the fact that families have learned to avoid unwanted births, but still do not know how to regulate child-bearing and have not been informed enough about it. Attention to this aspect of family life is an important prerequisite for an effective demographic policy.

Candidate of Geographic Sciences R. Tatevosov (MGU Center for Population Study) believes that demography should be more constructive--in addition to calculation, analysis and forecasting, overall long-range programs for population development should be worked out. It also is necessary to summarize available experience in demographic policy in the different regions.

Doctor of Medical Sciences M. Bednyy (Institute of Epidemiology and Medical Radiology of the RSFSR Ministry of Health) pointed out the important role of public health in the conduct of demographic policy. In improving the demographic situation, the role of local public health organs, whose workers implement measures of demographic policy locally, is large. For their work to be more effective, physicians must be attracted to agitation and propaganda work, although they often have not been informed about the features of the demographic situation in their region.



Candidate of Economic Sciences I. Gerasimova (TsEMI [Central Economics and Mathematics Institute] of the USSR Academy of Sciences) emphasized that measures of demographic policy, as also envisaged by the 26th CPSU Congress decisions, should be oriented not so much at the individual as the family. In order for measures of assistance to a family to influence parents' decision to have one more child, further improvement in the standard of living not only of families with children, but families in general, is necessary. In her opinion, the study of demographic processes and development of a demographic policy should be closely linked with economic problems, particularly problems of the standard of living.

Candidate of Medical Sciences S. Solomonov (Riga Medical Institute) expressed the opinion that the problem of reducing the mortality rate is not so much a medical one as a social and hygienic one. He told of an analysis of the mortality rate in which death from separate causes is linked with different unfavorable environmental conditions; results of such research indicate the directions in which the struggle to prolong life should be conducted.

Also speaking in the discussion of the reports were Doctor of Medical Sciences I. Mokerov (Ural Scientific Center of the USSR Academy of Sciences), Doctor of Economic Sciences T. Federova (Economics Institute, TaSSR Academy of Sciences), Candidate of Economic Sciences D. Yankovskaya (Institute of the Socioeconomic Problems of Foreign Countries of the UkSSR Academy of Sciences), Candidate of Economic Sciences O. Kositov (TaSSR branch of the Scientific Research Institute of Labor), Candidate of Economic Sciences R. Murtazina (Economics Institute of the UzSSR Academy of Sciences), and Candidate of Economic Sciences I. Kliandrov (Scientific Research Institute of Economics and Economico-Mathematical Methods of Planning of the TaSSR Gosplan).

Summing up the work of the session, T. Ryabushkin noted the significance for scientific research and practical work of the fact that the basic direction of demographic policy is broad, multifaceted aid to the family, which has been called upon to compensate for the decline in the standard of living with the birth of a child and to alleviate the situation for the working mother.

He called for further development of theoretical research in demography based on generalization of available experience, and for propaganda of demographic knowledge, which should not be superficial, but well-grounded.

In the recommendations approved by the session, basic directions were outlined in light of the 26th CPSU Congress decisions and the pressing problems of improving the effectiveness and organization of demographic research were raised.

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## DEMOGRAPHY

### DETAILS OF DEMOGRAPHIC TRENDS, POLICY OUTLINED

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 82 pp 3-8

[Article by T. Ryabushkin: "Demographic Policy in Light of the 26th CPSU Congress Decisions"]

[Text] The Communist Party of the Soviet Union and the Soviet Government are devoting a great deal of attention to social problems, among which demographic problems hold an important place.

The report by Comrade L. I. Brezhnev, general secretary of the CPSU Central Committee, at the 25th CPSU Congress pointed out the acute demographic situation in our country and set forth the task of working out an effective demographic policy. This also defined the direction in the 10th Five-Year Plan for the work of scientific research organizations and the different ministries and departments associated with study of the population problem.

The 26th CPSU Congress raised the questions of conducting an effective demographic policy in a practical aspect. The Basic Trends point to the need "To conduct an effective demographic policy, to promote consolidation of the family as the most important cell of socialist society and creation of the best conditions for combining motherhood with women's active participation in labor and public activity; to improve the support of children and those who are not able-bodied at the cost of society, and to implement a system of measures to increase persons' longevity and labor activity and to improve their health." Important aspects of this policy also come to light in the CPSU Central Committee and USSR Council of Ministers decree "On measures to reinforce state assistance to families with children."

In defining the program for development of the social sciences, the 26th CPSU Congress set the task of concentrating efforts on research in the theoretical problems of demography.

Just what are the problems associated with the current demographic situation in our country and the prospects for their solution?

Transition to an intensive type of reproduction is characteristic of the current stage in our country's population development. This transition has been conditioned to a significant extent by the requirements of public reproduction for a highly skilled labor force, which in turn has been connected with an increase in productive forces and scientific and technical progress.

The extensive type of population reproduction which preceded the intensive type was characterized by a high birth rate and a high mortality rate, especially infant mortality. In the past, a large family in which 10 or 12 children were born but 43 percent of them died before the age of 5, and even less survived until adulthood, was typical. This type of population reproduction, characteristic of prerevolutionary Russia, was associated with socioeconomic processes, with the mechanism of all public reproduction as a whole.

The intensive type of population reproduction, which came to replace the extensive type, is characterized by a low mortality rate, especially infant mortality, and a relatively low birth rate. In the past 10-year period the demographic situation has changed. Families with few children have replaced large families; ideas about the best number of children in a family became different, and some parents began to limit the size of their family. It should be stressed that this process took place not through the influence of some special state acts, not under the influence of intervention by state or public organizations, but because of objective regularity in development of the population itself, conditioned by the entire course of the society's social and economic development.

With reference to the current stage in our country's population development, the reduction of the increase in the population of working age certainly must be mentioned. Under current conditions, as Comrade L. I. Brezhnev noted at the 26th CPSU Congress, "a number of factors which complicate economic development will be having an effect. One of these is a decline in the increase in manpower resources."<sup>1</sup> While in previous years, and particularly in the 10th Five-Year Plan, a significant increase in the population of working age was observed, during which industry and services drew manpower reserves from the population not employed in the public sector, by the end of the 10th Five-Year Plan the increase in the population of working age had declined appreciably. This trend remains in the 11th Five-Year Plan as well. For this reason, "under conditions in the 1980's, a careful and thrifty relationship toward manpower resources assumes especial significance."<sup>2</sup> Most of this increase is in those regions of the country where the territorial and social mobility of the population is relatively low.

It follows from such a demographic phenomenon that the problem of a further increase in production and provision of services by additional manpower can be resolved basically by mobilizing internal resources and improving labor productivity, principally in physical production, as well as by shifting manpower from certain sectors to others.

More than three-fourths of the increase in national income in the 10th Five-Year Plan was obtained as a result of the increase in national labor productivity. In the 11th Five-Year Plan, the importance of this indicator is increasing still further, since no less than 85 to 90 percent of the increase in national income should be obtained through an increase in national labor productivity, that is, only about 10 percent of the increase in national income will be obtained as a result of the influx of manpower.

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1. Materials of the 26th CPSU Congress, Moscow, 1981, p 38

2. Op. cit., p 41

One more very important aspect of the demographic situation should be noted--the increase in the proportion of persons of old age in the population, basically as a consequence of a decline in the birth rate.

The problem of an aging population is a very important one in modern society. In our opinion, this problem is no less acute than, let us say, the problem of a decline in the birth rate in some regions of the country. Implementation of the slogan "active old age" is one of the characteristics in creating a valuable and fully developed identity for mature socialism.

The process of population aging is a natural consequence of a decline in the birth rate and typical of all economically developed countries. This process requires the most intent study because of the problems associated with providing for an ever greater number of persons who become elderly which are facing society. Above all, there is a need for accelerated increase in national labor productivity, which will contribute not only to better and better provision for those employed in public production, but for elderly persons as well.

The problem of utilizing them in public production is no less important, either. There are several paths here. First of all, pensioners should be attracted directly into public production that is already being carried out in our country. But for greater intensiveness in this process, it is necessary to create special working conditions for them, different from the working conditions for persons of working age: this relates to suitable occupations, work schedule and conditions which will help pensioners work while taking their health into consideration. In addition, different forms of attracting elderly persons to public activity should be provided for so that they do not feel an abrupt change in their way of life on a pension: when a person stops working, his psychology, the nature of social ties, and so forth, are changed. A carefully worked out system of measures to attract elderly persons to public activity in different public organizations (involvement in observation or supervision, for example, of the service process or the production process, and so forth) can be maintained in operation by tens of millions of persons who have much experience and knowledge, but who cannot actively work in former jobs.

Thus the transition to an intensive type of population reproduction has led to a change in the population's age structure.

Of course, in examining the demographic situation over an extended period of time, the significance of the socioeconomic transformations that have taken place in our country should be emphasized first of all: in the sectorial structure, in the health of the population, elimination of a number of diseases, improvement in the population's educational and cultural level, their skills, and so forth. All this has been treated extensively in our scientific and popular literature and is not the subject of this article.

Let us turn our attention to some features of population reproduction in our country associated with the process of transition to its intensive type.



In particular, let us consider the indicator of average life expectancy for newborn children. As is well known, this indicator is determined on the basis of mortality tables calculated from data on the mortality coefficients for each age group in the population at a given time. It means, therefore, the average number of years which a generation born in a given year would live, under the condition that the current mortality coefficients at each age are maintained for the duration of all life in this generation. This is a generalized characteristic of the mortality rate at a given time, depending on the mortality rate at each age, but not dependent on the age composition of the population. If in the long term the coefficients of the mortality rate are reduced, the indicator of average life expectancy will be increased, and vice versa.

The infant mortality rate exerts particular influence on average life expectancy. It is clear that if infant mortality is high, average life expectancy is very low, and if infant mortality is decreased, the indicator of life expectancy is increased.

The indicator of average life expectancy in our country during the years of Soviet rule has increased quite significantly. In the intensiveness of its increase, the Soviet Union has surpassed other economically developed countries. Our country, as a result of vast socioeconomic transformations, has achieved great progress in reducing infant mortality.

Owing to the radical change in the social living conditions of the country's working people, the great attention of the state to maternity and child protection, and the work of the sanitary and epidemiological service in the USSR from the first years of its existence, unprecedented rates of decline in the mortality rate began to take shape. The years of peaceful construction after the Great Patriotic War were a period when the life expectancy of the Soviet population increased particularly rapidly. In approximately 15 years of peaceful life it increased more than in 20 years. One may say with certainty that not one country in the world has known such a decline in the mortality rate. However, it should be pointed out that resources still exist for a further decline in both overall mortality as well as infant mortality. Precisely for this reason, a system of measures to protect the health of mother and child and to increase the life expectancy and labor activity of persons and improve their health are the most important components of demographic policy.

Let us examine another important demographic process--the birth rate. A decline in the birth rate in the recent period is typical not only for the Soviet Union, but for other countries as well. For example, in the United States, France, and especially the FRG, the birth rate is lower than in the USSR.

Surveys indicate that the dynamics of the birth rate are different in various regions of our country: in the union republics of the European part of the country, its level is declining slowly, with a trend toward stabilization, and in the Central Asian union republics the process of a birth rate decline is just beginning.

How do we regard the process of a decline in the birth rate?

Some researchers believe that there is nothing bad about a decline in the birth rate: the less children, the less burden on able-bodied persons not only in the individual family, but on society as a whole as well. Consequently, it is not worth being concerned about a decline in the birth rate. Others (of whom the author of this article is one) reject the concept of so-called zero growth, which is now being advocated in the United States and other capitalist countries. In spite of the intensive development of technology and scientific and technical progress, man and manpower have been, are, and remain the basic productive force of society. Population is a society's potential, its opportunity for technical and scientific progress. For this reason, a decline in the birth rate cannot be interpreted as a positive manifestation if it creates a threat to normal population reproduction. Consequently, a kind of optimal population reproduction system is necessary, which must be provided for in all economic regions of the country.

Much attention should be devoted to our country's rural population. As is well known, the rural population has been declining in the process of industrialization, owing to the outflow of population to the cities and industrial regions, and this has been a natural process. But the problem is that the migration of the rural population, which applies principally to young persons of productive age, has severely changed the age structure of the rural population. It is natural that no rayon or oblast will be able to develop in the right way where there is a small number of able-bodied persons.

The problems of population reproduction have necessitated the implementation of an effective demographic policy, to which our party's 25th and 26th congresses also have devoted attention.

What are the objectives of demographic policy in a socialist society? Demographic policy is an integral part of the program of social development and improvement in the people's standard of living. Demographic policy includes measures to consolidate the family, as well as demographic education of the population in the broad sense of the word. This education also should provide for extensive propaganda of demographic knowledge among the adult population and elements of demographic instruction in secondary schools and higher educational institutions. Demographic policy in a socialist society is based on principles of humanism and democracy.

What does an active demographic policy mean? An active demographic policy is understood to be a system of measures which ensures optimum population reproduction, accompanied by an increase in the people's living standard and improvement in their health, culture, and so forth.

The state does not plan demographic processes by itself, but it can and should regulate them by a number of measures. At the same time, demographic policy measures should be differentiated and flexible. They should have their own characteristics in each region, republic, oblast, and so forth.

Aspects of population reproduction have been differentiated in different regions of the country, that is, contrasts exist for every aspect of natural population movement. And depending on these contrasts, it is obvious that demographic policy

measures also should be differentiated. What has been said may be illustrated, for example, in the birth rate. In the Soviet Union as a whole, the overall coefficient of the birth rate in 1980 amounted to 18.3 percent. The country's highest birth rate is in Tajikistan, where this indicator is 37.0 percent, and the lowest is in the Latvian SSR, at 14.0 percent.

Some scientists oppose a regional demographic policy, since this supposedly may mean violation of the rights of individual nationalities or the rights of residents of individual regions, and so forth. In our view this is not true at all. For example, at present it is necessary, in our view, to conduct a policy of stimulating the birth rate in those republics where it is low. Special measures also are needed in the struggle against infant mortality in those regions where it is still relatively high.

The CPSU Central Committee and USSR Council of Ministers decree "On measures to reinforce state assistance to families with children" may serve as an illustration of a differentiated approach to the demographic phenomena of different regions of the country which have sharply different working conditions and ways of life. It notes that implementation of additional measures has been stipulated to reinforce state assistance to families with children: introduction by stages, beginning in 1981, of partially paid leave for working mothers whose total length of service is no less than 1 year, as well as for women who are being trained without discontinuing work, to care for a child when it has reached 1 year of age. Payment for this leave will be made at the rate of 50 rubles monthly in regions of the Far East, Siberia, and the country's northern regions, and at the rate of 35 rubles monthly in other regions.

It should be stressed in particular that the struggle against the incidence of disease, premature death and infant mortality, further improvement in the quality of medical service and working, living and environmental conditions, that is, everything connected with people's health and which, in the final analysis, affects the mortality rate indicators, is one of those cornerstones on which demographic policy should be built.

It is completely obvious that the number of children in a family cannot be regulated by legislation. According to demographers' calculations, the optimum number for population reproduction is two to three children per family (a 2.6 average). It should be noted that polls of the population on the number of children expected in the family, conducted by organs of the USSR Central Statistical Administration, indicated that aside from regions of Central Asia, where the number of children anticipated is high (four to five), this number is relatively low in the RSFSR, the Baltic union republics, the Ukraine and Belorussia.

Consequently, the policy in the birth rate field in republics where the birth rate is still low consists of creating conditions which ensure, first of all, stabilization of the current birth rate level and secondly, conditions for some increase.

A system of measures to create these conditions already has been worked out, and part of them should be implemented in the current five-year plan. In subsequent five-year plans the measures will be expanded. This relates to allowances for working mothers with minor children, establishment of a flexible working schedule

for working mothers, for assistance to young families, and so forth. An extensive list of such measures has been provided in the CPSU Central Committee and USSR Council of Ministers decree mentioned previously.

Reinforcement of the family is an important aim of demographic policy. Precisely reinforcement of the family, creation of a social and psychological climate which is favorable to development of the family, creation of a cult of the mother and a cult of the child, it is necessary to stress—a cult of the mother and a cult of the child in combination with the material conditions and a real guarantee of an opportunity to combine the functions of motherhood and participation in national labor—should create the best conditions for stabilization and maintenance of the best birth rate level.

Implementation of the broad social program set forth by the 26th CPSU Congress, in particular, in the field of demographic policy, will contribute to normalization of the demographic situation in all regions of the country and will provide for further development of productive forces.

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# DEMOGRAPHY

NUMBER OF MEDICAL INSTITUTIONS, HOSPITAL BEDS, DOCTORS AND SECONDARY MEDICAL PERSONNEL AT THE END OF 1980 LISTED

Moscow VESTNIK STATISTIKI in Russian No 12, Dec 81 pp 51-73 (excerpt pp 71-72)

11. Number of Medical Institutions and Number of Hospital Beds at the End of 1980*				
	Number of Medical Institutions, Providing Out Patient and Polyclinic Assistance**	Number of Medical Institutions	Number of Hospital Beds	
			Thousands	Per 10,000 People
USSR .....	36,122	23,107	3324.2	124.9
In particular for the cities:				
Alma-Ata.....	74	50	16.5	171.1
Ashkhabad.....	32	20	5.3	163.3
Baku.....	199	90	21.2	134.0
Vilnius.....	27	19	9.6	192.0
Gor'kiy.....	119	71	19.8	144.8
Dnepropetrovsk.....	104	42	15.8	141.8
Donetsk.....	60	49	17.4	163.7
Dushanbe.....	59	24	7.3	142.2
Yerevan.....	105	41	10.4	97.7
Kazan'.....	110	55	15.0	149.1
Kiev.....	216	88	30.7	137.9
Kishinev.....	85	26	9.0	165.2
Kuybyshev.....	112	63	16.1	129.5
Leningrad.....	470	140	55.0	118.2
Minsk.....	106	31	17.4	129.3
Moscow.....	886	233	111.6	137.5
Novosibirsk.....	137	64	19.3	141.3
Odessa.....	104	43	12.9	122.7
Omsk.....	98	53	15.4	144.6
Perm'.....	81	46	14.9	145.4
Riga.....	64	35	13.6	161.8
Sverdlovsk.....	82	63	20.3	161.4
Tallinn.....	39	22	6.6	143.9
Tashkent.....	235	82	26.4	143.8
Tbilisi.....	164	60	15.4	142.1
Ufa.....	68	35	15.6	155.2
Frunze.....	59	26	9.8	180.4
Khar'kov.....	126	65	21.3	145.0
Chelyabinsk.....	66	51	15.7	146.3

\* Data are given for cities including the urban settlements under the jurisdiction of the city soviet.

\*\* Included in the number of medical institutions that render out patient and polyclinic assistance are all medical institutions that receive out patients (polyclinics, out patient clinics, dispensaries, polyclinic departments in medical institutions, medical health centers and others).

**12. Number of Physicians and Secondary Medical Personnel  
at the End of 1980\***

	Number of Physicians of All Specialties		Number of Secondary Medical Personnel	
	Thousands	Per 10,000 People	Thousands	Per 10,000 People
USSR.....	995.6	37.4	2789.9	104.8
In particular for the cities:				
Alma-Ata.....	8.3	85.7	14.1	146.3
Ashkhabad.....	2.7	84.5	3.6	109.7
Baku.....	11.4	72.2	19.8	125.2
Vilnius.....	3.6	73.1	7.4	147.8
Gor'kiy.....	8.2	59.7	16.3	119.5
Dnepropetrovsk.....	6.2	55.9	11.3	101.3
Donetsk.....	6.5	61.0	13.3	125.1
Dushanbe.....	3.8	73.7	6.9	136.0
Yerevan.....	7.3	69.3	12.5	117.6
Kazan'.....	6.3	62.6	11.3	112.3
Kiev.....	18.0	80.8	30.8	138.3
Kishinev.....	4.9	91.0	8.3	152.7
Kuybyshev.....	7.5	60.2	15.9	127.7
Leningrad.....	37.1	79.8	67.3	144.5
Minsk.....	9.1	67.8	17.5	130.0
Moscow.....	75.4	92.8	142.1	175.0
Novosibirsk.....	8.3	61.0	15.7	114.7
Odessa.....	8.7	82.5	15.9	151.1
Omsk.....	6.5	61.4	14.2	133.3
Perm'.....	5.9	57.1	11.5	112.5
Riga.....	6.2	73.7	12.4	147.3
Sverdlovsk.....	8.0	63.4	15.8	126.0
Tallinn.....	2.8	61.1	5.7	125.9
Tashkent.....	12.9	70.4	24.8	135.1
Tbilisi.....	11.7	107.5	15.5	142.5
Ufa.....	6.1	60.2	11.6	115.2
Frunze.....	4.4	80.8	7.9	145.4
Khar'kov.....	9.4	63.8	17.5	119.0
Chelyabinsk.....	6.1	56.5	13.0	121.3

\* Data are given for cities including the urban settlements under the jurisdiction of the city soviet.

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